# A Study on Urinary Neutrophil Gelatinase Associated Lipocalin (NGAL) and Clinical Profile of Patients with Acute Kidney Injury (AKI) in Medical ICU

A dissertation submitted to the Tamilnadu

Dr. M.G.R. Medical University in partial fulfillment of the University regulations for the award of D.M. (Branch – III) (Nephrology).


**AUGUST 2015**

# BONAFIDE CERTIFICATE

This is to certify that the work presented in this dissertation titled "**A Study on Urinary Neutrophil Gelatinase Associated Lipocalin (NGAL) and Clinical Profile of Patients with Acute Kidney Injury (AKI) in a medical ICU**" done towards fulfillment of the requirements of the Tamilnadu Dr. M.G.R. Medical University, Chennai for the D.M. (Branch–III) (Nephrology) exams to be conducted in August 2015, is a bonafide work of the candidate **Dr. Vibhanshu Gupta**, Senior Post-graduate student in the Department of Nephrology, Christian Medical College, Vellore under my guidance and supervision. This dissertation has not been submitted, fully or in part to any other board or University.

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# DECLARATION

I ,**Dr. Vibhanshu Gupta**, Senior PG Registrar in the Department of Nephrology , Christian Medical College, Vellore under guidance of Professor **V.Tamilarasi** (Guide) and **Dr. Shibu Jacob** (Co-guide) declare that the work presented in this Dissertation titled "A Study on Urinary Neutrophil Gelatinase Associated Lipocalin (NGAL) and Clinical Profile of Patients with Acute Kidney Injury (AKI) in medical ICU" done towards fulfillment of the requirements of the Tamilnadu Dr. M.G.R. Medical University, Chennai for the D.M. (Branch–III) (Nephrology) exams to be conducted in August 2015, has not been submitted, fully or in part to any other board or University.

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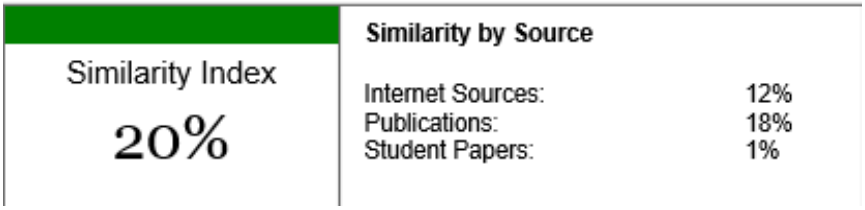


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1. Institutional Review Board approval 2. Agreement

Could you please sign the agreement and send it to Dr. Nihal Thomas, Addl. Vice Principal (Research), so that the grant money can be released.

With best wishes,

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The Institutional Review Board (Blue, Research and Ethics Committee) of the Christian Medical College, Vellore, reviewed and discussed your project entitled "A study on urinary neutrophil Gelatinase associated lipocalin (NGAL) and clinical profile of patients with acute kidney injury (AKI) in a medical ICU." on February 19, 2014.

The Committees reviewed the following documents:

1. IRB Application format
2. Curriculum Vitae' of Drs. Vibhanshu Gupta, Tamilarasi, Shibu Jacob, T.S. Vijay Kumar, Santosh Varughese, Anna T Valson, Suceena Alexander, Kishore Pichamuthu, Nathaniel Samson, Atul More.
3. Information sheet (English, Tamil, Hindi, Bengali &Tamil)
4. Consent form (English, Tamil, Hindi, Bengali &Tamil)
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We approve the project to be conducted as presented.

The Institutional Ethics Committee expects to be informed about the progress of the project, any **adverse events** occurring in the course of the project, any **amendments in the protocol and the patient information / informed consent**. On completion of the study you are expected to submit a copy of the **final report**. Respective forms can be downloaded from the following link: http://172.16.11.136/Research/IRB_Polices.html in the CMC Intranet and in the CMC website link address: http://www.cmch-vellore.edu/static/research/Index.html.

*Fluid Grant Allocation:*

*A sum of 75,000/- INR (Rupees Seventy Five Thousand only) will be granted for 18 months.*

Yours sincerely

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# CONTENTS

# ABBREVIATIONS

**AKI - Acute Kidney Disease**

**ICU – Intensive Care Unit**

**CKD – Chronic Kidney Disease**

**ARDS – Acute Respiratory Distress Syndrome**

**ADQI – Acute Dialysis Quality Initiative**

**RIFLE – Risk Injury Failure Loss ESRD**

**ESRD – End Stage Renal Disease**

**GFR – Glomerular Filtration Rate**

**RRT – Renal Replacement Therapy**

**AKIN – Acute Kidney Injury Network**

**CS-ICU – Cardiac Surgery ICU**

**BMT – Bone Marrow Transplant**

**LTx – Liver Transplant**

**ICU ECMO – ICU patients treated with Extracorporeal membrane oxygenation for acute renal failure**

**TGFβ – Transforming Growth Factor β**

**ATN – Acute Tubular Necrosis**

**BrdU – Bromodeoxy Uridine**

**NKT – Natural Killer T cells**

**TCR – T Cell Receptor**

**IFNγ – Interferon γ**

**TNF – Tumour Necrosis Factor**

**MCP-1- Monocyte Chemotactant Protein 1**

**ROS – Reactive O2 Species**

**TLR – Toll Like Receptors**

**HSP – Heat Shock Protein**

**MAPK – Mitogen Activated Protein Kinase**

**ERK – Extracellular Regulated Protein Kinase**

**SAPK – Stress Activated Protein Kinase**

**JNK – Jun N Terminal Kinase**

**IGF-1- Insulin Like Growth Factor 1**

**EGF – Epidermal Growth Factor**

**HGF – Hepatocyte Growth Factor**

**FGF – Fibroblast Growth Factor**

**BMP 7 – Bone Morphogenic Protein 7**

**Rv – Resolvin**

**PD – Protectins**

**I/R – Ischemic  Reperfusion**

**NIH – National Institute Of Health**

**ROC – Receiver Operating Characterstic**

**AUC – Area Under Curve**

**IL 18 – Interleukin 18**

**CIN – Contrast Induced Nephropathy**

**KIM1 – Kidney Injury Molecule 1**

**NAG – N – acetyl β ( D) Glucosaminadase**

**NGAL – Neutrophil Gelatinase Associated Lipocalin**

**L – FABP – Liver Fatty Acid Binding Protein**

**PPAR – Peroxisome Proliferator Activated Receptor**

**GM CSF – Granulocyte / Monocyte Colony Stimulating Factor**

**APACHE-Acute Physiology and Chronic health evaluation**

**MMP 9 – Matrix Metalloproteinase 9**

**ATP – Adenosine Triphosphate**

**FENa – Fractional Excretional of Sodium**

**SIRS – Systemic Inflammatory Response Syndrome**

**CPB – Cardio Pulmonary Bypass**

**HGF – Hepatocyte Growth Factor**

**VEGF – Vascular Endothelial Growth Factor**

**BMI – Body Mass Index**

**SOFA – Sequential Organ Failure Assessment**

**ELISA – Enzyme Linked Immunosorbent Assay**

**CLD – Chronic Liver Disease**

**CAD - Coronary Artery Disease**

**CVA – Cerebro Vascular Accident**

**COPD – Chronic  Obstructive Pulmonary Disease**

**GCS – Glassgow Coma Scale**

**HRP – Horse Raddish Peroxidase**

**TMB – Tetra Methyl Benizidine**

**ANOVA – Analysis Of Variance**

**ALT – Alanine Amino Transferase**

**AST – Aspartate Amino Transferase**

**Pmp- Per million population**

**NIH- National Institute of Health**

**MOF- Multiple Organ Failure**

**DAMA- Discharged Against Medical Advice**

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# Introduction

Acute Kidney injury (AKI) in the ICU set up has been a rising problem with the past few decades showing a change in the profile of patients getting admitted to the ICU's. They are more severely ill as compared to 10-15 years back and often have multiple organ involvement and associated sepsis and other comorbidities.[1] AKI in ICU has a significant effect on patient outcome and recently has been equated to other two syndromes of Severe sepsis and Acute lung injury that determine patient prognosis in ICU.

An understanding of factors affecting renal recovery might improve overall outcome. The current study is undertaken to study the profile of AKI and factors which predict its outcome in the ICU set up. Recently a number of novel biomarkers have not only been shown to predict AKI but also its outcome. Neutrophil gelatinase associated Lipocalin is one such biomarker that has also been called as the Renal Troponin due to its excellent performance in predicting AKI prior to rise of serum creatinine but also in predicting outcome. Few studies from South India have validated the utility of NGAL in AKI .Present study also aims to look into the utility of urinary NGAL in predicting AKI outcomes as a Pilot project in view of the costs incurred.

The Medical Intensive Care unit in CMC, Vellore has a monthly average admission rate of 80-90 patients from all medical specialties. Hence the study is undertaken with an intention to look into the causes of AKI as well as into the factors affecting the renal

outcome in the ICU of this tertiary care hospital of South India. Simultaneously the study of urinary NGAL in predicting the outcomes shall be done as a PILOT project.

# REVIEW OF LITERATURE

**ACUTE KIDNEY INJURY:** Acute kidney injury (AKI) is one of the common clinical syndromes in Nephrology with a host of underlying etiologic factors. It commonly occurs in the in-hospital setting with increasing frequency as the admission place changes to the Intensive Care Unit (ICU) [1]. It causes significant morbidity including increased length of hospital stay, progression to Chronic kidney disease (CKD) as well as being associated with in hospital mortality.[1,2] In fact with the requirement of Renal replacement therapy mortality rates can go as high as 60%. In the ICU setting AKI has emerged as a powerful clinical syndrome besides Sepsis and Acute Respiratory Distress Syndrome (ARDS) to predict patient outcome [3].

**DEFINITIONS OF ACUTE KIDNEY INJURY:**

Until 2004 there was no standard definition of Acute Kidney Injury .In fact when applied to the same cohort, different definitions resulted in different incidence and prevalence rates for AKI thus adding to confusion. It was in 2004 when Acute Dialysis Quality Initiative (ADQI) group came up with the RIFLE classification of AKI with an aim to standardize its definition for clinical and research purposes [4]. As depicted in Fig.1 RIFLE includes three AKI severity classes i.e. 'Risk', 'Injury' and 'Failure' in increasing order of severity and two outcome classes : 'Loss' and 'End stage kidney disease'. The severity classes are based on changes in urine output, serum creatinine and Glomerular Filtration rate with the worst of the variables defining severity. The outcome classes Loss

and End stage kidney disease depend on the duration of loss of renal function viz. 4 weeks and 3 months respectively.

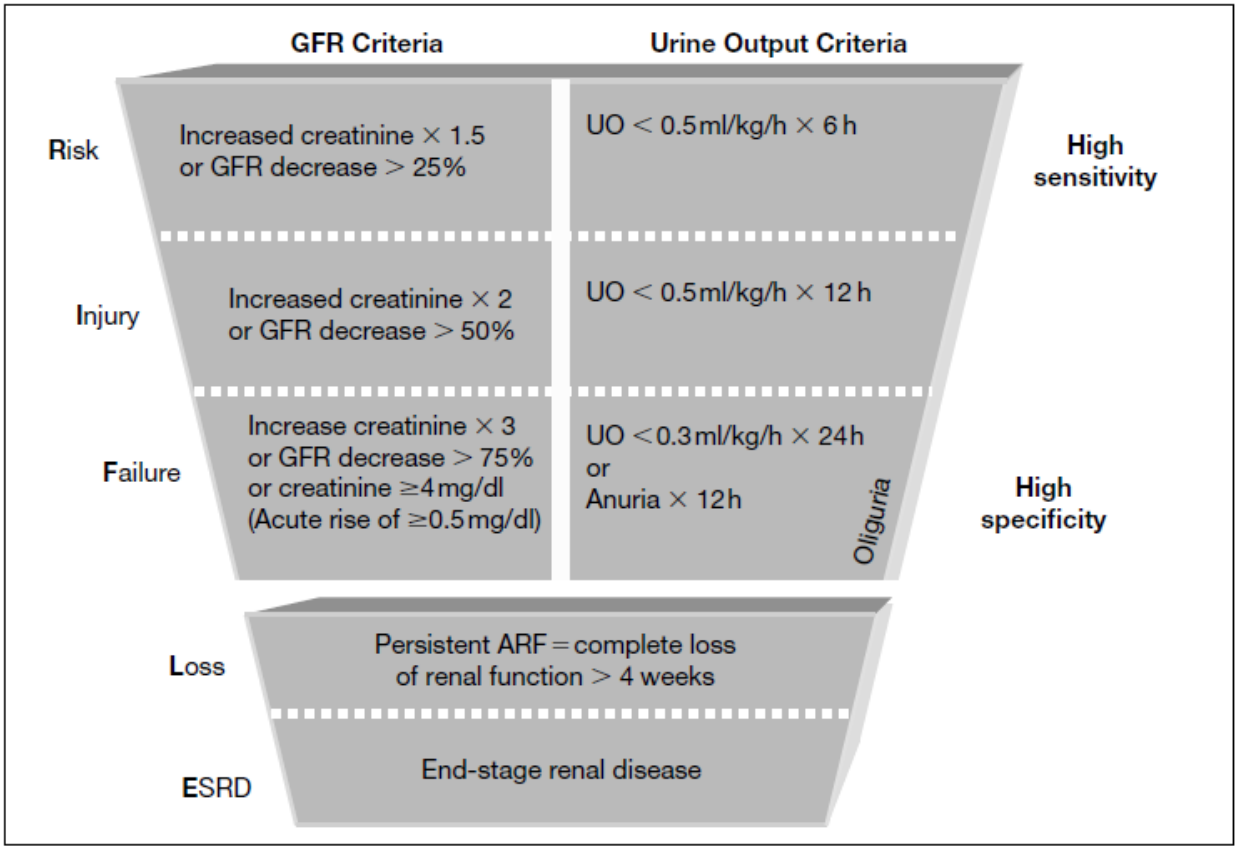



**Fig.1 RIFLE Criteria for Acute Kidney Injury *(from Reference 4)***

*GFR: Glomerular Filtration RATE; ESRD: End Stage Renal Disease*

**AKIN STAGING :** While the RIFLE criteria was a significant advancement towards standardization of the definition of Acute Kidney Injury ,it had certain drawbacks .First, the Risk class definition of increase in serum creatinine to 1.5 times of baseline was considered as too conservative as even smaller increases in creatinine were shown to affect outcome. In fact Chertow et al [5] showed that even 0.3 mg% increase in serum

creatinine was associated with increased morbidity and mortality. Second the RIFLE classification does not consider the requirement of Renal Replacement Therapy (RRT) in defining the severity of AKI. Considering these drawbacks, in 2007 the AKIN group suggested modifications in the RIFLE classification. These included broadening the 'Risk' class to include an increase in serum creatinine of 0.3 mg% occurring within 48 hours and adding the need of RRT irrespective of serum creatinine to the 'Failure' class. Finally the RIFLE classes Risk', 'Injury' and 'Failure' have been replaced by AKIN stage 1, 2 and 3 respectively [6] [Table 1], In fact modification of 'Risk' class has increased the sensitivity for diagnosis of AKI further.

**Acute Kidney Injury Network (AKIN) and RIFLE Classifications of Acute Kidney Injury**

| AKIN Staging | | RIFLE | |
|---|---|---|---|
| **Serum Creatinine** | **Urine Output (Common to Both)** | **Class** | **Serum Creatinine or GFR** |
| *Stage 1:* Increase of ≥0.3 mg/dl (≥26.5 μmol/l) or increase to ≥150% to 200% (1.5-fold to twofold) from baseline | <0.5 ml/kg/h for >6 h | Risk | Increase in serum creatinine ×1.5 or GFR decrease >25% |
| *Stage 2:* Increased to >200% to 300% (more than twofold to threefold) from baseline | <0.5 ml/kg/h for >12 h | Injury | Serum creatinine ×2 or GFR decreased >50% |
| *Stage 3:* Increased to >300% (more than threefold) from baseline, or ≥4.0 mg/dl (≥354 μmol/l) with an acute increase of at least 0.5 mg/dl (44 μmol/l) or on RRT | <0.3 ml/kg/h for 24 h or anuria for 12 h | Failure | Serum creatinine ×3, or serum creatinine > 4 mg/dl (>354 μmol/l) with an acute rise >0.5 mg/dl (>44 μmol/l) or GFR decreased >75% |
| | | Loss | Persistent acute renal failure = complete loss of kidney function for longer than 4 weeks |
| | | End-stage kidney disease | ESRD > 3 months |

**Table 1: AKIN vs. RIFLE Classification**

**KDIGO STAGING:** In 2012 Kidney Disease: Improving Global Outcomes introduced the composite AKI staging which is almost the same as the AKIN staging except for in patients younger than 18 years a decrease in GFR to less than 35ml/min/1.73m$^2$ is also included in the stage 3 [7] .

**EPIDEMIOLOGY OF ACUTE KIDNEY INJURY:** Since the first publication of RIFLE in 2004 numerous studies have been done in different settings to validate it. Accordingly the incidence of AKI varies depending on the cohort studied. Table 2 illustrates the incidence of AKI in different patient population along with the maximum RIFLE class attained in each.

| First Author (Reference No.) | Cohort | Patients n | AKI% | Risk% | Injury% | Failure, % |
|---|---|---|---|---|---|---|
| **Cruz (20)** | ICU | 2,164 | 10.8 | 2.1 | 3.8 | 4.9 |
| **Heringlake*b* (29)** | CS-ICU | 29,623 | 16 | 9 | 5 | 2 |
| **Uchino*b* (10)** | Hospital | 20,126 | 18 | 9.1 | 5.2 | 3.7 |
| **Kuitunen (30)** | CS-ICU | 813 | 19.1 | 10.8 | 3.4 | 4.9 |
| **Lopes (16)** | BMT | 140 | 33.5 | 13.5 | 10 | 14.3 |
| **Lopes*b* (15)** | Burn | 126 | 35.7 | 14.3 | 8.7 | 12.7 |
| **Ostermann (22)** | ICU | 41,972 | 35.8 | 17.2 | 11 | 7.6 |
| **O'Riordan (13)** | Liver Tx | 359 | 35.9 | NA | 10.9 | 25.1 |
| **Lopes (17)** | Sepsis | 182 | 37.4 | 6.0 | 11.5 | 19.8 |
| **Lopes (28)** | HIV-ICU | 97 | 47.4 | 12.4 | 9.6 | 25.8 |
| **Ahlstrom (31)** | ICU | 685 | 52.0 | 25.5 | 15.2 | 11.2 |
| **Guitard (14)** | Liver Tx | 94 | 63.8 | NA | 41.5 | 22.3 |
| **Hoste (27)** | ICU | 5,383 | 67 | 12.4 | 26.5 | 28.1 |
| **Lin (32)** | ICU-ECMO | 46 | 78.2 | 15.2 | 39.1 | 23.9 |
| **Abosaif (21)** | ICU-AKI | 183 | 86.9 | 32.8 | 30.6 | 23.5 |
| **Bell (33)** | ICU-RRT | 207 | 90.8 | 8.2 | 24.2 | 58.5 |
| **Maccariello (34)** | ICU-RRT | 214 | 100 | 25.0 | 27.0 | 48.0 |

**Table 2: Different Studies in Acute Kidney Injury**

*ICU, intensive care unit; CS-ICU, cardiac surgery ICU; BMT, bone marrow transplant patients; Burn, burn unit patients; Liver Tx, liver transplant patients; NA, not assessed; HIV-ICU, patients with human immunodeficiency virus infection admitted to the ICU; ICU-ECMO, ICU patients*

*treated with extracorporeal membrane oxygenation for acute renal failure; ICU-AKI,ICU patients with AKI;ICU-RRT,ICU patients requiring renal replacement therapy*

**Population based studies :** Few studies have looked at the incidence of AKI in general population .One of such studies was done in Northern Scotland by Ali et al [8] using the RIFLE criteria and included a population base of 523,390.The annual incidence of AKI was 2147 per million population with sepsis being the commonest etiology of renal dysfunction. Another study done by Hsu et al [9] in Northern California from 1996-2003, reported the incidence of AKI to be 4085 per million population (pmp) although it used somewhat different criteria than RIFLE for diagnosis of AKI. They also reported an increase in the use of acute RRT from 195 pmp/yr in the period 1996–1997 to 295 pmp/yr in the period 2002–2003.

**Hospital Studies:** Uchino et al. [10] studied AKI using the RIFLE classification in a cohort of 20,126 patients admitted to a teaching hospital for more than 24 hour over a period of 3 years. Overall incidence of AKI was 18%. The maximum RIFLE class achieved was Risk in 9.1%, Injury in 5.2 % and Failure in 3.7% of patients. In multivariate logistic regression analysis 'R' carried an odds ratio of in- hospital mortality of 2.5, class 'I' of 5.4, and class 'F' of 10.1. Similarly Fang et al. [11] studied 176,155 patients from a tertiary hospital in Eastern China over a 4 year period. Using the AKIN staging the incidence of AKI was 3.19% and higher AKIN stages had greater association with in –hospital mortality. Recently Murugan et al [12] in a prospective multicenter trial estimated the incidence of AKI using the RIFLE criteria in 1836 patients admitted in 28

different hospitals in USA for Community Acquired Pneumonia .Overall incidence of AKI was 34% , with 58% occurring in patients with severe sepsis and 24% in patients without severe sepsis.

O'Riordan et al [13] and Guitard at al [14] studied the incidence of AKI in Liver transplant in 359 and 94 patients and found the incidence to be 35.9% and 63.8% respectively .Of note all the patients were in RIFLE class I or F.

Lopes et al has studied AKI in specific population groups including Burns [15], Bone marrow Transplant [16] and Sepsis [17] and has found the incidence to be 33.5%, 35.7%, 37.4% respectively.

**Acute Kidney Injury In ICU Set Up:**

In different ICU studies AKI occurs in up to two thirds of patients. Approximately, 5% of ICU patients develop AKI severe enough to require RRT [18, 19]. Also mortality in these ICU patients requiring RRT is heavily dependent on other organ dysfunction and comorbidities amounting to 50-60% [18,19].

NEiPHROS-AKI was a prospective multicenter AKI study, carried out in 19 ICUs in northeastern Italy over a 3-month period [20]. Using the RIFLE criteria, 234 (10.8%) out of 2164 patients developed AKI of which 19% were in R class, 35% in I, and 46% were in F class. Overall mortality was 20%, 29.3% and 49.5% in R, I and F class respectively .Similarly in 2005, Abosaif et al [21] found that RIFLE class predicted mortality: 74.5% in Failure, 50% in Injury and 38.3% in Risk category.

Ostermann and Chang [22] in 2007 retrospectively analyzed the incidence of AKI in 41,972 patients admitted between 1989 and 1999 to 22 ICUs in UK and Germany. AKI as defined by the creatinine criteria of RIFLE, occurred in 15, 019 (35.8%) patients. Of these AKI patients 7207 (48 %) were in R, 4613 (30.7%) had I, and 3199 (21.3%) were in F class. In - hospital mortality rates were highest in F (56.8%), followed by I (45.6%) and 20.9% in R class as compared to 8.4% in non AKI patients .Similarly, from January 2000 to December 2005, Bagshaw et al. [23], studied AKI by RIFLE using only creatinine in 120, 123 patients admitted in 57 intensive care units across Australia for at least 24 h period. Category wise AKI class was R in 16.3%, I in 13.6%, and F in 6.3% patients, cumulating to 36.1% overall. In multivariate analysis, each RIFLE category had independent association with hospital mortality with Odds Ratio of 1.58, 2.54, and 3.22 for R,I,F classes respectively.

In one of the largest ICU studies Thakar et al. [24] retrospectively analysed the data of 191 ICU'S comprising 323, 395 patients across USA and used the AKIN staging (Modified RIFLE) for the diagnosis of AKI. He found the overall incidence of AKI to be 22% (71,486 patients) after excluding many cases of community acquired AKI. Of these 17.5% had stage 1, 2.4% had Stage 2 and 2% had stage 3 AKI. The odds ratio of mortality after adjusting for severity of illness was 2.2 for stage 1, 6.1 for stage 2 and 8.6 for stage 3. In 2009 Joannidis et al. [25] compared the RIFLE criteria with and without the modification of 0.3 mg/dl increase in serum creatinine within 48 h as proposed by AKIN in 16,784 patients admitted across 330 ICUs in Austria. They found that using the AKIN staging resulted in increase in AKI incidence by 3% while at the same time they also

showed that by excluding the patients who met the RIFLE criteria of 1.5 times increase in serum creatinine compared to baseline but did not exhibit an increase of serum creatinine of at least 0.3 mg/dl over 48 h or less, they would not be able to diagnose AKI in 10% of patients. Thus a combination of both change from baseline creatinine and an absolute rise of 0.3 mg% in less than 48 hours is the best combination for the diagnosis of AKI.

NEFROINT [26] was a prospective observational multicenter study to evaluate the profile of AKI in incident patients admitted to 10 ICU's in Italy. It studied 576 patients (25 patients with End stage renal disease were excluded) of which 42.7% (246) had AKI at admission while 133 developed new AKI during stay. RIFLE-initial class was Risk in 54.1% (205) patients, Injury in 26.1% (99) and Failure in 19.8% (75) patients.AKI further progressed to higher class in 30.8% (114) patients. Forty eight patients (8.3%) required renal replacement therapy of which significant patients had sepsis. AKI patients had significantly higher mortality (28.8%) vs. non AKI patients (8.1%) with P<0.001.Complete renal recovery occurred in 205(59.7%) of AKI, partial recovery in 51 (13.5%) while 103 (27.2%) did not recover renal function at ICU discharge/ death. In another study Hoste et al [27] studied 5383 critically ill patients in 7 ICU's with AKI occurring in 67% of them. Of these 12% achieved a maximum of R class, 27% reached I class and 28% attained F class. Patients with no AKI had 5.5% mortality while those with R had 8.8%, I had 11.4% and those in F class had 26.3% mortality rate.

Lopes et al studied 97 HIV patients admitted to ICU and found the incidence of AKI to be 47.4%, not much different from general population [28]. Heringlake et al [29] and Kuitunen et al [30] studied AKI in Cardiac Surgery ICU in 29,623 and 813 patients with

incidence of 16% and 19.1% respectively .In both studies more than 50% of patients were in Risk class (Table 2)

**RECOVERY FROM ACUTE KIDNEY INJURY:**

Besides the increased risk of in hospital mortality, AKI can cause persistent loss of renal function including a dialysis dependant state. This includes both development of progressive Chronic Kidney Disease (CKD) and increased rate of progression of pre-existing CKD. (Fig.2)

Recent studies have associated AKI survival to subsequent CKD or end-stage renal disease (ESRD) development. Chawla et al [35] assessed 11,589 patients for AKI and evaluated the risk for CKD progression in AKI patients. A total of 5351 patients had AKI of which14% (728) entered stage 4 CKD. Patients with more severe AKI especially those requiring RRT and subsequently recovered were at higher risk for progression to CKD.

Acute Renal Failure Trials Network (ATN) study of intensity of dialytic support only 53% of surviving patients had complete or partial recovery of renal function by 28 days while by day 60 only 16% could be discharged off dialysis [36]. It is possible that the renal recovery in AKI survivors is dependent on a number of factors including the underlying etiology of kidney disease and AKI severity (Fig. 2).

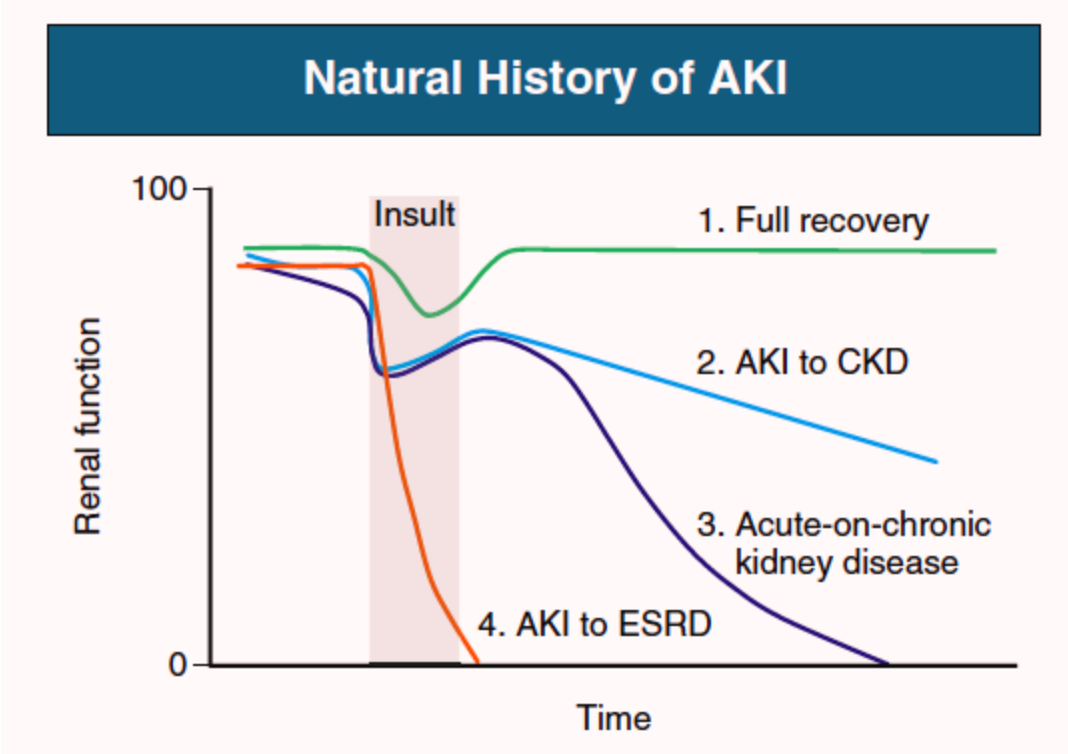



**Fig .2: Renal outcomes of AKI (Amdur R etal KI 2009)**

A large study by Ishani et al in 2009 in U.S. cohort of medical beneficiaries (age ≥ 67 years) without prior evidence of CKD found that an AKI episode resulted in an eightfold increased risk of CKD G5.[37] To estimate the risk of progressive CKD in known CKD population Hsu et al studied patients with preadmission baseline eGFR < 45 ml/min/1.73 $m^2$ and found that those who developed an episode of AKI requiring dialysis had very high risk of developing CKD 5G[38].Another U.S. study evaluated the risk of progressive CKD after AKI in patients with a baseline eGFR more than 45 ml/min/1.73 $m^2$ [39]. Patients who required dialytic support for AKI but became dialysis independent within 30 days of discharge had a 28-fold increased risk of progressing to CKD G4 or worse.

Coca SG et al in 2012 did a meta-analysis of 13 cohort AKI studies and reported that the cumulative incidences of CKD and CKD G5 after Acute Kidney Injury were 25.8

and 8.6 per 100 person-years, respectively [40]. Pooled adjusted relative risks in these AKI patients for subsequent CKD and CKD G5 compared to those without AKI were 8.8 (95% CI 3.1-25.5) and 3.1 (95% CI 1.9- 5.0) respectively. Depending on the severity of AKI older adults have 2-13 times the risk for development of ESRD after a single episode of AKI. Also after a single AKI episode the annual absolute risk of CKD G5 ranges from 0.6% to 1.2% in those who experience mild AKI and up to 9% in those with preexisting CKD [41].

Age, unmeasured comorbidity and frailty might be confounding factors for the association between AKI and subsequent CKD. However CKD development has been linked to AKI in pediatric patients who are generally not affected by these confounding factors. In this regard126 critically ill pediatric AKI survivors who had completely recovered their kidney function were studied [42] .This study revealed that overall 10% patients developed CKD over 3 years of follow up (albumin to creatinine ratio less than or equal to 30mg/g or eGFR less than 60ml /min /m2) .Also it is noteworthy that 38% of cohort had mildly decreased eGFR 60-90 ml/min and 3.2% had hypertension both being risk factors for future CKD)

**Link between AKI and CKD**: Incomplete repair or pathological transition of the repair process can result in renal non recovery and progression to CKD. Nath et al [43] in his work on rats showed that repeated cutaneous glycerol injection would result in recurrent AKI with reversible decrease in creatinine clearance but subsequently it led to slow loss of renal reserve with increased Transforming Growth Factor β (TGF β) expression and

interstitial fibrosis. In ischemia/ reperfusion and cisplatin induced AKI in rats chronic reductions in concentrating ability have been observed even after single episode of insult [44,45] .Following a single bout of ischemia reperfusion in rats the proximal tubule repair usually is complete by 4-6 weeks while increased expression of TGF β also normalizes in 4 weeks .In case where the repair process is delayed to 16-40 weeks ,features of CKD including proteinuria, interstitial fibrosis manifest along with secondary increase in TGF β [45].In case AKI occurs in the presence of reduced renal mass there are greater chances of incomplete repair and progression to CKD [38] . Patgulanan et al. did morphometric analysis of ultra thin serial sections in AKI patients to show that an AKI episode resulted in nephron dropout which was presumed to be due to loss of contact between the tubule and the parent glomerulus [46]. AKI in reduced renal mass models has been associated with dilated tubules which contain differentiated cells expressing profibrotic factors like Platelet Derived Growth Factor which may initially help in physiological repair, however with sustained expression may cause fibrosis [47].Also renal vascular epithelium repair seems to be reduced as compared to tubular epithelium as capillary microfill experiments show a reduction in capillary density of 30-50% most pronounced in inner stripe of outer medulla following recovery from AKI[45].The role of inflammatory cells and immune system in progression to CKD has been demonstrated in several studies. Forbes et al, showed that blockade of ED-1 positive macrophages by treating with an endothelin antagonist early decreased the late complications of acute kidney injury [48]. The role for T cells in CKD development was demonstrated by Chandrakar et al, who showed that blockade of the B7 costimulatory pathway after one month of unilateral I/R injury with

reduced renal mass, resulted in a substantial decrease in progressive proteinuria and interstitial fibrosis with recovery occurring in up to 6 months [49]. Burne-Taney et al demonstrated that splenocytes from injured mice transferred to non injured recipients promoted proteinuria within 12 weeks of injury, suggesting the role of immune responses in CKD progression [50]. Finally, in a study by Pechman et al, it was shown that blocking the lymphocyte function with mycophenolate mofetil from 5 weeks after recovery from I/R injury prevented the building up of hypertension and interstitial fibrosis associated with elevated sodium intake [51]

## PATHOPHYSIOLOGY OFACUTE KIDNEY INJURY:

Pathophysiologic classification of AKI broadly divides it into pre-renal, intrinsic renal and post renal mechanisms. [52] While post renal AKI accounts for about 10% of cases secondary to intrinsic or extrinsic obstruction the remainder is taken care of by Pre-renal and intrinsic renal mechanisms. Post renal AKI is characterized by acute obstruction to urinary flow and rise in intratubular pressures and decrease in glomerular filtration rate (GFR). It can also cause reduction in renal blood flow as well as trigger inflammatory processes resulting in further reduction in GFR [53, 54]. Pre-renal AKI occurs secondary to a reduction in renal perfusion and a fall in Glomerular filtration rate thus resulting in a 'functional' decline without any histopathological evidence of renal injury [55].The various causes of such decline include decreased cardiac output ,systemic vasodilation ,volume depletion ,afferent arteriolar constriction and efferent arteriolar vasodilation.

Since the tubular function is maintained hence conservation of Sodium and water results to maintain intravascular volume and renal perfusion in low urinary sodium and high urine osmolarities [56].

As compared to the pre-renal AKI, intrinsic AKI may affect different compartments of the kidney which include the glomeruli, tubules, interstitium and the vascular compartment. Hence it may manifest in acute tubular necrosis or intratubular obstruction, acute interstitial nephritis ,acute glomerulonephritis or may involve the renal micro/macrovasculature causing thrombotic microangiopathies and vascular thrombosis/embolism respectively.

Most cases of hospital acquired AKI are secondary to Acute tubular necrosis (ATN) which occurs due to ischemic or nephrotoxic insult. The etiology of AKI in the ICU is again a combination of decreased renal perfusion, sepsis and nephrotoxic agents resulting in prerenal injury to frank ATN. The S3 segment of proximal tubule followed by the medullary thick ascending limb of  loop of Henle have been considered to be the most important sites of injury in ATN. This is due to the chronic low Oxygen concentration in the medullary region as well as high metabolic rates [57].

Clinically ATN can be divided into initiation, extension, maintenance, and recovery phases. The *initiation* phase starts with reduction in renal blood flow severe enough to cause ATP depletion and cellular injury. This sublethal injury of tubular cells results in disruption of the filamentous actin architecture [58] and translocation of the Sodium-Potassium ATPase and other proteins from basolateral to apical surface .As a result there

is decreased salt and water retention in the proximal tubule which activates the tubuloglomerular feedback. Recent evidence shows that there may be activation of epithelial and possibly endothelial cells resulting in upregulation of inflammatory cytokines [59].

The *extension* phase is characterized by continued hypoxia and inflammatory response both of which are predominant at the corticomedullary junction and outer medulla. The cells in the outer medulla predominantly continue to undergo injury and death via necrosis and apoptosis [60] .Cellular detachment leads to intraluminal cast formation and obstruction resulting in further fall in GFR. There is further amplification of the inflammatory cascade due to production of chemokines and cytokines [61].Fig .3 shows the interplay between inflammation and tubular and vascular injury in the extension phase of ATN.

During the *maintenance* phase to maintain tubular integrity the cells undergo proliferation, migration, apoptosis and repair with the GFR remaining stable at a level determined by the severity of initial insult. Lin et al. used a transgenic cre-lox approach to label renal tubular epithelial cells and track their progeny following I/R injury. They were able to demonstrate that Bromodeoxyuridine (BrdU) localized in Cre-induced transgene expressing dedifferentiated cells signifying that the source of regenerating cells could be resident, non lethally injured tubular epithelial cells [62].Other groups have also confirmed that the primary source of regenerating new cells in repair is sublethally damaged renal tubule cells [63]. Slowly the maintenance phase gives way to *recovery*

*phase* characterized by increased cell proliferation , restoration of polarity and return of organ function [64].

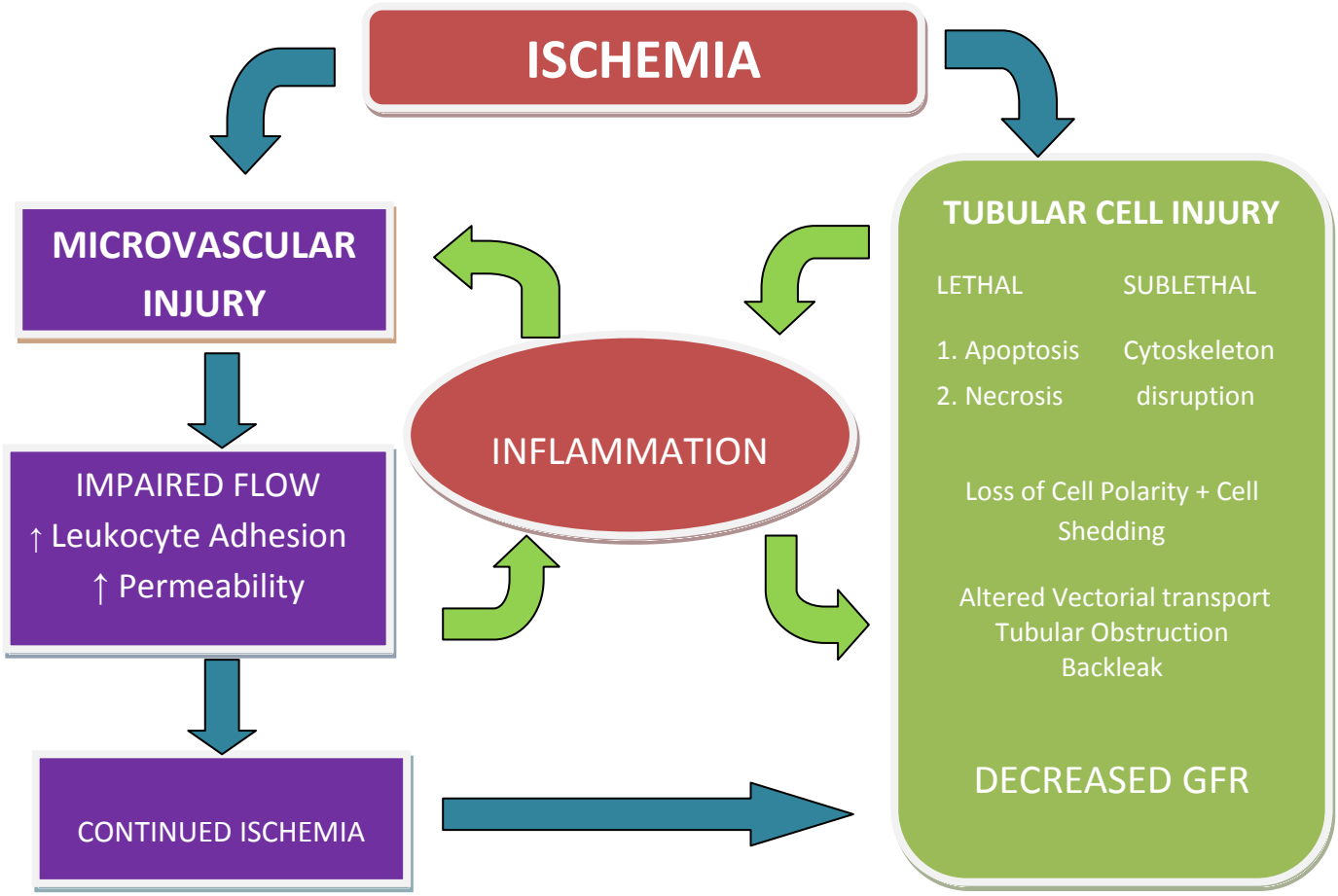



**Fig.3: Extension Phase of AKI**

The hemodynamic changes in ATN consist of sustained increase in renal vascular resistance caused by number of mediators including increased sympathetic nervous system activity [65], ,endothelin [66], Platelet activated factor[67], adenosine as well as direct

injury to vessel walls leading to decreased vascular responsiveness. In fact alteration in vascular responsiveness has been shown to occur even one week after recovery from Ischemia/Reperfusion injury when total renal blood flow has returned to normal[68].

**Role of inflammatory cells and cytokines:** A variety of cells including neutrophils , T cells, macrophages and dendritic cells have been implicated to play important role in the inflammatory cascade in AKI. While the role of neutrophils is unclear as they are not prominent in biopsies of patients with AKI, recent evidence suggests that T cells may play important role in ATN. While T cells are found in the medullary vasa recta region in animal models of AKI and also in biopsies of patients with AKI [69, 70] , there role in pathogenesis has been supported by studies which have demonstrated that depleting the T cells using the antibody neutralizing [71] or genetic approach [72] results in reducing the I/R injury. However the fact that CD4+ T cells are cells of antigen specific adaptive immunity and require 2-4 days of processing puts their role in ATN to question. However, natural killer T (NKT) cells express both the TCR (T cell receptor) and the marker NK1.1 thus representing a unique smaller subset of CD4+ cells. These cells are capable of producing large amounts of cytokines both Th1 type such as Interferon γ (IFNγ) and Tumor Necrosis Factor (TNF) or Th2 type like IL-4 and IL13. In fact , NKT producing IFNγ are present within 3 hours in the post-I/R kidney injury [73]. Blockade of activation of NKT cell with the anti-CD1d mAb or NKT cell depletion with anti-NK1.1 mAb in wild-type mice, or use of *i*NKT cell deficient mice (Jα18−/−) inhibits the accumulation of IFN-γ-producing neutrophils after I/R injury and prevented AKI [73].

Macrophages are found to infiltrate the injured kidney within 1 hour of ischemia reperfusion in response to expression of fractalkine (CX3CL1) by injured endothelial cells which is a potent chemoattractant and adhesion molecule for them . Blockade of CX3C receptor-1 on macrophages by specific antibody reduces the severity AKI in mice [74]. In the setting of Acute kidney injury, macrophages are most abundant during the repair phase with a distinct population, referred to as M2 macrophages being active . These M2 macrophages secrete anti inflammatory cytokines such as IL-10 and TGF-β and may help in tissue repair by secreting potential trophic growth factors and angiogenic factors [75,76]. Wang et al., demonstrated that ex vivo programming of macrophages to an M2 phenotype would reduce chronic renal inflammation [77].Also administration of macrophages during the repair phase of ATN hastens recovery [78].Dendritic cell activation has been suggested to lead to TNF α production in ischemic AKI [79], but there are few functional studies to support it. That dendritic cells may have a protective role was supported by a study which showed that ablation of CD11c + Dendritic cells increased the sensitivity to cisplatin induced injury [80].

Both tubular cells and leukocytes produce a number of inflammatory mediators to promote postitive feedback loop of inflammation producing further kidney injury. Tubular epithelial cells can produce IL-1, IL-6, IL-8, TNF-α, Monocyte Chemotactant Protein 1 (MCP-1) ,Transforming Growth factor β (TGF-β), ENA78, RANTES and fractalkines while leukocytes may produce IL-1, IL8, MCP-1, reactive oxygen species (ROS) and eicosanoids. [81].

IL1β is a chemotactic factor that recruits leukocytes to injured areas.The blockade of IL-1β decreases the infiltration of neutrophils following ischemic injury, but does not improve the consequent loss of renal function [82]. IL-18 is increased in AKI and is considered an early biomarker of acute tubular injury [83].Injured proximal tubules activate the expression of IL-6 on infiltrating macrophages and IL6 is elevated in mice following AKI [84]. Other systems which have been implicated in AKI are the Toll like receptors (TLR's) and complement system. In fact TLR 4 is expressed on capillaries of vasa recta within 4 hours of ischemia reperfusion injury with secondary increases occurring within 24 hours on the proximal tubular cells [85].There is evidence that alternate pathway of complement may be active during ischemia reperfusion [86] with C3a and C5a contributing to injury with activation of apoptosis and impairment of recovery responses.

**Repair and Regeneration:**

**Renal stress respone:** Acute kidney injury activates cytoprotective pathways which can be broadly divided in three broad categories:

**1.Heme Oxygenase (Inducible HO) and anti-oxidant genes:** Heme Oxygenase is the rate limiting step in the heme catabolism producing biliverdin, iron, and carbon monoxide (CO).The enzyme occurs in two isoforms : the inducible HO1 and the constitutive HO2[87].In animal studies HO1 is rapidly induced following nephrotoxic [88], glycerol-rhabdomyolysis [89], and ischemia/reperfusion [90] injury.HO-1 reduces oxidant stress by degradation of heme , a toxic pro-oxidant, as well as by generation of bilrubin which is a

peroxy radical scavenger that prevents lipid peroxidation. Besides CO can have potential vasodilatory effect resulting in improvement of renal blood flow. Mice with a HO-1 null mutation suffer from more severe AKI and have increased mortality in ischemia reperfusion [91], glycerol [89], and LPS [92] AKI models while induction of HO-1 expression by viral delivery of HO-1 gene or by intravenous infusion of hemoglobin prior to injury protects from AKI [93, 94].

**2. Heat shock proteins (HSP):** They belong to multigene protein family ranging in size from 10–150 kDa and are found in all major cellular compartments [95].The protective properties of HSPs is widely ascribed to their activity as "molecular chaperones," which are considered to aid in the assembly and repair of newly synthesized or degenerated proteins [96]. An important role of HSPs is linked to the stabilization and revival of cytoskeletal structure following AKI. During recovery after ischemia/reperfusion , the Na, K, ATPase gets reincorporated in the cytoskeleton which is aided by HSP 70 [97].

Emami et al in one of the earliest reports suggested the role of heat shock proteins in protection from acute kidney injury. Exposure to transient minimal ischemia of 15 min resulted in upregulation of heat shock protein72 (HSP72), which resulted in protection from later ischemia/reperfusion injury [98].Since then many more members HSP family have been found. It is now clear that not only HSP 72, but also other members including HSP10, HSP 25/27, HSP47, HSP70 , HSP90 as well as αβ-crystallin play important role in diverse models of AKI including ischemia reperfusion, cisplatin toxicity and unilateral ureteral obstruction [99, 100, 101].

HSP-chaperone activity may also aid in cytoprotection by manipulation of the biochemical pathways leading toward cell death i.e. apoptosis or necrosis [102]. Heat Shock Proteins may also be having role as cellular antioxidants. In MDCK cells exposed to oxidant stress, HSP-70 controlled the superoxide production by increasing the activity of enzymes glutathione reductase and glutathione peroxidase [103].

Recently, Kim et al., confirmed that increased expression of HSP-27 in proximal tubules conferred protection from ischemic AKI [104]. Also higher basal levels of HSP-72 and HSP-27 have been reported in Brown Norway rats which are more resistant to AKI than the commonly utilized Sprague Dawley rats [105] .

**3. Stress activated protein kinases :** Cellular stress results in activation of two related parts of the mitogen-activated protein kinase (MAPKs) signaling pathway- the extracellular-regulated protein kinases (ERKs), and the stress-activated protein kinase (SAPK), also identified as Jun N-terminal kinase (JNK and p38).Both of these kinases are activated in response to tubular stress /AKI [106] .Following ischemic injury JNK activation occurs in both proximal and distal tubule [107]while its down regulation has been shown to reduce the peroxide induced proximal tubular injury [108]. Inhibition of ERK activity in proximal tubules of opossum has been shown to block apoptosis associated with cisplatin nephrotoxicity [109].

**Regeneration:**

The restoration of structure and function of proximal tubule following renal injury requires complex and coordinated cellular activity and not just proliferation [110] . The newly proliferative cells are dedifferentiated, smaller in size with loss of epithelial

markers and express vimentin [111]. They rapidly realign the denuded proximal tubule basement membrane, undergo hyperplasia and differentiation with a decrease in cellular number per cross sectional area towards normal. Concomitantly there is a wave of apoptosis that restores tubular cell density to normal and may last from between one week to several months of recovery [112].

Proximal tubule cells can proliferate on exposure to a variety of mitogens like insulin-like growth factor-I (IGF-1) [113], epidermal growth factor (EGF) [114], hepatocyte growth factor (HGF) [115] , and fibroblast growth factor (FGFs) [116].However not all of them have been shown to play important roles in the regeneration process. While IGF 1 has been shown to be expressed in regenerating tubular cells [117] and HGF levels are increased in urine of AKI patients [118], there is no definite evidence of their role in renal repair. Recently Bone Morphogenic Protein 7 (BMP 7) has been found to have significant potential of stimulating tubular cell proliferation and also acting as anti- fibrotic agent in CKD. Exogenously administered BMP 7 helps in early recovery from AKI [119].

EGF is expression is decreased in multiple forms of AKI [120], still it is expressed and may help in renal repair. Also different members of FGF family are increased after the induction of ischemic and nephrotoxic injury.

Discovered by Serhan et al [121] Resolvins (Rv) and protectins (PD) are two novel families of n–3 fatty acid docosahexaenoic acid metabolites shown to play important role in resolution of AKI. Mouse kidneys have been shown to produce D series resolvins (RvDs) and PD1 [122] in response to I/R injury .Also the administration of these metabolites prior

to and after the injury has been shown to have protective effect on kidney by decreasing inflammation as well as it reduces the resulting interstitial fibrosis.

## BIO MARKERS OF ACUTE KIDNEY INJURY:

**Biomarker-Definition:** As per the *NIH Biomarkers Definitions Working Group*, a biological marker (biomarker) is defined as "A characteristic that is measured objectively and is evaluated as an indicator of normal biological processes, pathogenic processes or pharmacologic responses to a therapeutic intervention." [123]

**Characteristics of Ideal Biomarker:** Although it is impossible to find a biomarker with all the characteristics as mentioned below still an approximation of them is desired [123,124].

(1)It should be non invasive and easily measured, inexpensive and produce quick results;

(2) It should be tested from easily available sources, such as blood or urine;

(3) The biomarker should have a high sensitivity, allowing for early detection of disease, without overlap between diseased patients and healthy controls;

(4) It should have a high specificity, being greatly affected in the diseased samples specifically and not by comorbid conditions;

(5) The levels of biomarker should change quickly in response to treatment;

(6) Biomarker levels should help in risk stratification and provide prognostic information regarding outcomes;

(7) It should be biologically plausible and should help to understand the disease mechanism

The receiver operating characteristic (ROC) curve depends on both sensitivity and specificity and the area under the ROC curve (AUC) for a biomarker at specific cut off is a good measure of its validity. While an AUC of 1 means a perfect biomarker but it is not practically possible.An AUC of 0.75 represents a good biomarker while that of 0.9 is considered excellent for all practical purposes [124].

**Need for Biomarker in AKI:** While serum creatinine and urine output have been established markers of renal damage since long time, serum creatinine cannot be considered as a sensitive/specific marker for AKI. This is because of the presence of a 'Window period' of 8- 48 hours when AKI continues without manifesting as increase in serum creatinine which occurs later only[125] .In fact serum creatinine may show upward trend only once about 50% of renal function has been lost .Also the production of creatinine from muscle is decreased in AKI due to sepsis, thus rise in creatinine may not be according to decline in GFR [126].Besides several non-renal factors can affect creatinine levels irrespective of renal function - age, gender, race, nutritional status, muscle mass, infection, total parenteral nutrition and certain drugs. In fact trimethoprim, cimetidine and salicylates are known to alter the tubular secretion of creatinine causing changes in its level independent of GFR [127].Fig.4 shows the window period where novel biomarkers may have a potential role in early diagnosis and intervention.

## Novel Biomarkers of AKI

**1. Interleukin 18:** Interleukin 18 is a proinflammatory cytokine produced by variety of cells in the body including mononuclear cells , dendritic cells ,renal epithelial cells etc.It

has been implicated in the pathogenesis of a number of conditions including arthritis, ischemic AKI, Acute coronary syndrome and others. Caspase 1 is the enzyme which activates both IL-18 and IL-1 β [128]. In freshly isolated mice proximal tubules it was shown that hypoxic tubules expressed high levels of IL-18 [129].Thereafter another study demonstrated increased urine IL 18 in mice with ischemic AKI than sham operated controls [128].Subsequently urine IL 18 was found to be raised in humans with ATN than normal controls, patients with prerenal azotemia, urinary tract infection nephrotic syndrome ,and chronic kidney disease.[130]

A nested case control study was performed within the ARDS network trial to determine the utility of IL-18 in predicting AKI in ICU patients. Urine IL- 18 had an area under the receiver operated characteristic (ROC) curve of 0.73 as a predictor of AKI in the next 24 hours thus establishing as a good biomarker [131]. In a pediatric cohort of 137 children with an average age of 6.5 years (47% female) the peak IL-18 levels significantly correlated with the severity of AKI as defined by the pediatric RIFLE (pRIFLE) classification. Urinary IL-18 rose 2 days prior to significant increase in serum creatinine in critically ill non septic AKI patients and were independent predictor of mortality. Besides they were also increased in sepsis [132].In 55 children who underwent cardiopulmonary bypass urinary IL-18 started increasing at 4-6 hours of procedure in those who developed AKI. It peaked to almost 25 times at 12 hours and consistently remained elevated upto 48 hours post procedure. In comparison serum creatinine increased only 48-72 hours after the procedure in the AKI patients.[133]

Haiyan he et al studied IL-18 in 180 patients who underwent coronary intervention and received low osmolal contrast. Contrast induced nephropathy (CIN) as defined by increase in serum creatinine by 0.5 mg% or ≥25% increase over baseline within 24-48 hours of procedure occurred in 16 (8.9%) patients.IL-18 levels increased in these patients even after 2 hours of procedure though not significantly , but the rise became significant at 6,12,24 and 48 hours as compared to pre procedural levels. Serum creatinine did not show significant difference between pre procedure values and 24 hours after procedure. The area under the ROC curve for IL-18 for predicting CIN was 0.811. [134]

Recently in a meta-analysis of 18 studies, IL-18 level predicted AKI with a sensitivity and specificity of 0.58 and 0.75, respectively. Also the area under the ROC curve for IL-18 for predicting AKI was 0.70 (95% CI, 0.66-0.74)[135].

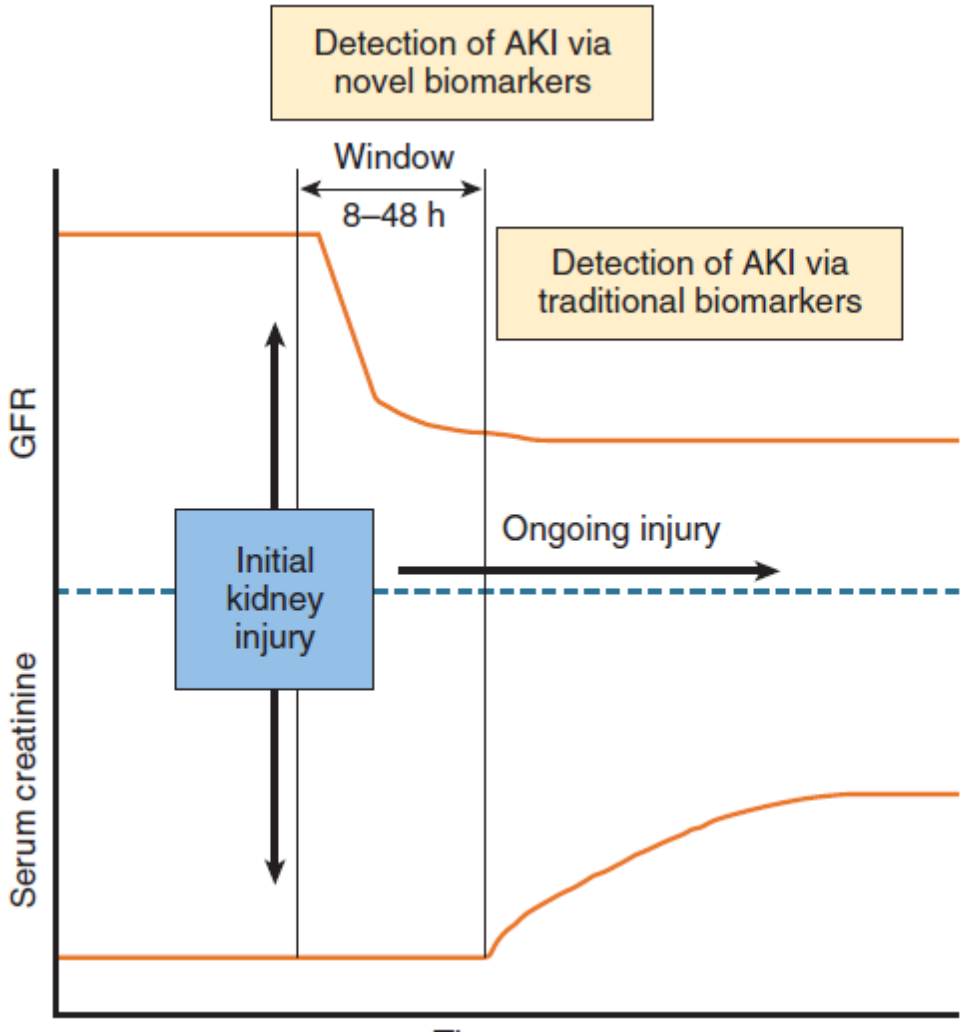



**Fig. 4: Timing Diagram of Acute Kidney injury (From Ref. 125)**

**2. Kidney Injury Molecule 1:**

Kidney injury molecule 1 (KIM 1) is a recognized epithelial cell adhesion molecule which contains an immunoglobulin domain. In fact normal kidney expresses KIM 1 mRNA and protein at a low level in but its levels increase rapidly in ischemic AKI [136]Urinary KIM 1 have been showed to be elevated significantly in both cisplatin induced and ischemic AKI in rats.[137] In a small study of 32 patients with various acute

and chronic kidney diseases, and eight normal controls urinary KIM 1 levels were significantly higher in patients with ischemic ATN as compared to other patients/controls.In all six patients with renal biopsy proven ATN there was widespread expression of KIM 1 in proximal tubule cells [138] . In a study involving 90 patients undergoing cardiac surgery ,urinary KIM 1, N acetyl beta (D) glucosaminidase (NAG) and Neutrophil gelatinase associated lipocalin (NGAL) were measured immediately and 3 hours post surgery. Thirty six patients (40%) had AKI within 72 h of surgery. The area under ROC curve for KIM 1 to predict AKI immediately and 3 h after surgery was 0.68 and 0.65 respectively. A combination of the three biomarkers, KIM 1, NAG and NGAL, improved the sensitivity for early detection of AKI at 0 and 3 hours of procedure to 0.75 and 0.78 respectively [139].

In a meta-analysis of 11 studies involving a total of 2979 patients, urinary KIM-1 had a sensitivity of 74.0% and a specificity of 86.0% for the diagnosis of AKI. The area under the ROC curve for KIM 1 to predict AKI was 0.86 (95% CI, 0.83–0.89). [140]

**3. Cystatin C:**Cystatin C is produced by all nucleated cells of the body .It is a polypeptide containing 120 amino acid residues .Its completely reabsorbed in the proximal tubules and is not secreted anywhere in the nephron [141].

In 127 patients undergoing cardiac catheterization, Artunc et al studied serum creatinine, serum cystatin C and the clearance of the iodinated contrast iopromide (reference standard for GFR ). Serum cystatin C had a higher correlation (0.805) to the iopromide clearance compared to serum creatinine (0.652).Also serum cystatin C levels of more

than 1.3 mg/L confirmed renal failure with a sensitivity of 88%and 96% specificity as defined by an iopromide clearance of less than 80 mL/min/m2.[142]

Rosenthal studied cystatin C and creatinine in live renal donors before and after uninephrectomy. Serum cystatin C rose 1 day after uninephrectomy as compared to serum creatinine that increased after 2 days of procedure[143] . Orlando et al studied Inulin, serum cystatin C and creatinine clearances in 36 patients with decompensated cirrhosis and 56 non cirrhotic controls .Plasma cystatin C and not serum creatinine or creatinine clearance was an accurate marker of GFR in the cirrhotic patients. In fact plasma creatinine and calculated creatinine clearance, varied with the severity of the liver disease and did not correlate with GFR[144].

Cystatin C was compared to creatinine in detecting AKI as defined by the the RIFLE classification in 85 high risk patients .Serum cystatin C rose by more than 50% at an average of 0.6 days earlier than the increase in serum creatinine thus concluding that serum cystatin C is a better marker for the detection of AKI than creatinine [145].To study the use of urinary cystatin C for the early identification of AKI, plasma and urine samples were collected from 72 adults undergoing elective cardiac surgery [146]. While plasma NGAL and cystatin C levels did not predict AKI within the first 6 h of procedure but urinary cystatin C and NGAL were elevated in 34 patients who later developed AKI, compared to patients with no AKI. With urinary Cystatin C being the most useful at 6 hours to predict AKI.

Thus it is possible that Cystatin C may be an ideal endogenous marker as all nucleated cells produce it at a constant rate, its levels are unaffected by changes in height, gender, age and muscle mass, nutrition and is neither secreted nordegraded by renal tubules. In fact in Germany in 2002 ,at a multinational meeting it was concluded that cystatin C was equal if not superior marker of GFR than creatinine. It may actually be of benefit to use it as a marker in children ,elderly people and reduced muscle mass patients [147].

**4. Liver fatty acid binding protein (L-FABP):** It acts as a carrier protein for fatty acids and other lipophilic substances like ecosanoids and retinoids .Some of the FABPs help in transportation of lipophilic molecules from outer cell membrane to intracellular receptors like PPAR and also in transportation of fatty acids between extra and intracellular membrane.

In a model of Folic acid induced kidney injury in mice L FABP levels in both kidney and urine was found to have a major correlation with the degree of tubulointerstitial damage [148].In live related human renal transplants ,renal peritubular blood flow and ischemia time had a significant correlation with the urinary L-FABP levels [149].

40 pediatric patients were assessed for urine L-FABP levels just before undergoing cardio-pulmonary bypass surgery .Following surgery 21 patients developed AKI . Enzyme linked immunosorbent assay analysis in these patients revealed increased L-FABP levels of about 94 and 45 fold at 4 hrs and 12hrs, respectively which was confirmed by western blot analysis. This study showed urine L-FABP to be a sensitive and predictive early biomarker of AKI following cardiac surgery [150].

Further in a study of 80 critically ill patients it was shown that urine L-FABP levels were higher in patients with septic shock as compared to patients with severe sepsis alone [151].

To summarise , urine L-FABP is increased in patients with AKI. Also, it is the urinary LFABP levels and not serum L-FABP levels that is increased in patients with septic shock. L-FABP is also a biomarker for progression of chronic kidney disease.

**5. IL-6 and IL-8:**IL6 which is a proinflammatory cytokine plays an importrant role in immune response and haematopoesis .It is basically found in endothelium , macrophages and fibroblast . IL8 is also a proinflammatory cytokine .It functions by activating and recruiting the neutrophils .In a mouse model of AKI IL8, IL6 and IL12 levels were significantly raised early after onset of ischaemia. Serum and urine levels of IL 8 were highest after 3 hour of induction of ischemia and before occurrence of significant rise in serum creatinine. There was a significant fall in the levels of IL1 , IL2,IL4 and IFN $\gamma$ after AKI while IL 1b, IL 3, IL 5, IL 10, IL 12 (p70), IL 17, GM CSF and RANTES did not show any change as compared to no AKI group [152] .

In renal allograft recipients, urine IL 8 was found to be markedly elevated in patients who had delayed graft function as compared to patients with immediate graft function [153].

In the PROWESS (Prospective Recombinant Human Activated Protein-C Worldwide Evaluation in Severe Sepsis) trial, of the 547 patients from the placebo group 127 developed AKI . In a multivariable Cox regression model log IL 6 and APACHE II score were important predictors of AKI [154].

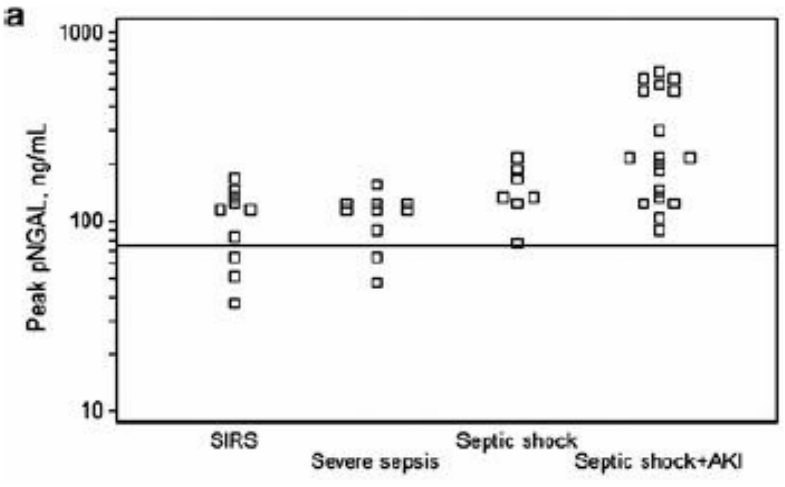
## NEUTROPHIL GELATINASE ASSOCIATED LIPOCALIN (NGAL):

NGAL, also known as Lipocalin 2/Siderocalin is a 25 kDa glycosylated polypeptide member of lipocalin superfamily of proteins. Human NGAL is made up of 178 amino acid residues linked by a single disulfide bond and can exist as monomer with molecular weight (MW) of 25kDa ,homodimer with MW of 35kDa or as heterodimer complexed with Matrix Metalloproteinase 9 (MMP 9) [155]. In neutrophils it is present chiefly as homodimer and small percent occurs as monomer or heterodimer while renal epithelium secretes mainly monomers when under stress. [156,157].This is supported by the observation that patients with urinary tract infection have raised homodimeric NGAL while those with AKI have predominant monomeric molecule [157,158].

NGAL has capacity to bind siderophores and thus is involved in iron traffic to and fro between cells. Because iron is important for bacterial proliferation and can also cause tissue injury by free radical generation , hence by sequestering iron NGAL can act as bacteriostatic agent as well as protect from inflammation associated injury [159,160].It has also been shown to promote iron dependant differentiation of mesenchymal progenitors into nephrons during renal development [161].

NGAL is expressed at very low concentrations in other human tissue like trachea ,colon, lung, kidney etc. and its levels increase in stimulated epithelia due to inflammation [156].It is also expressed in adenomas and inflamed bowel epithelium[162], adenocarcinoma breast[163], urothelial cancers [164].Being a small peptide and due to resistance to protease

degradation NGAL is freely excreted in the urine both in free and complex form with MMP 9.Thus urinary levels correlate with plasma levels, but specifically high NGAL levels in urine can be found when released from ischemic tubules [165]. While both urinary and plasma NGAL have been shown to be elevated in different forms of AKI including post cardio-pulmonary bypass, Contrast induced Nephropathy, critically ill patients etc. urinary NGAL may be better in characterizing AKI as has been suggested by study by Mårtensson, Bell et al. They showed that mean plasma NGAL levels were more elevated in patients with sepsis than without sepsis irrespective of GFR. They studied peak levels of plasma NGAL (**a**) and urinary NGAL (**b**) in non-AKI patients (N=27) with SIRS, severe sepsis, and septic shock and in AKI patients with septic shock (N=18).Plasma NGAL (pNGAL) were elevated in all four groups as shown in Fig.5 and was not significantly different between Septic shock with and without AKI groups. Urinary NGAL (uNGAL) was less confounded by sepsis being significantly elevated in AKI patients with septic shock .It was good predictor of AKI in next 12 hours (AUC ROC of 0.86) as compared to pNGAL with an area under ROC curve of only 0.67 [166].



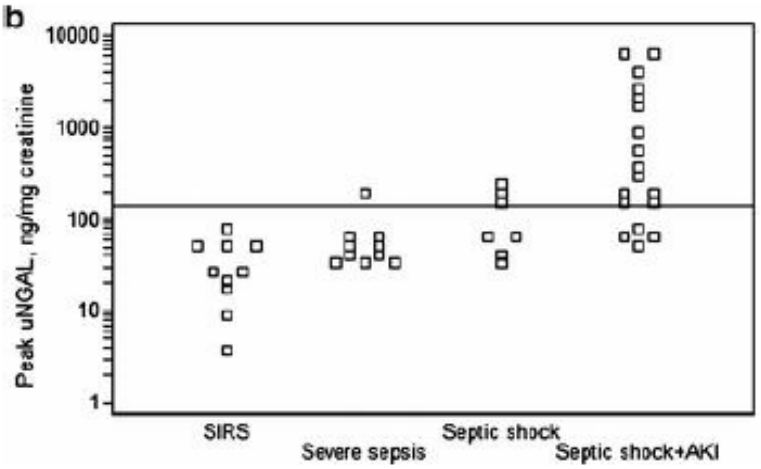



**Fig.5 Urinary NGAL Vs. Plasma NGAL (*from Reference 166*)**

Study by Mishra et al showed that NGAL mRNA and protein was produced in cultured human proximal tubule cells within 1 hour of ATP depletion due to Ischemia/reperfusion injury. This confirmed that the source of urinary NGAL was kidney proximal tubule cells and not merely activated neutrophils which are found to accumulate in ischemic AKI at around 4 hours and peak at 12 hours of insult. Also these neutrophils have not been found to express the NGAL mRNA in the renal tissue [167].

A large number of studies have analysed the utility of both plasma and urinary NGAL in post Cardiopulmonary bypass AKI in both children and adults. In children urine and plasma NGAL at 2 hours of surgery predicted AKI and plasma NGAL was also associated with the duration of AKI and mortality [168, 169].Similarly in adults mean urinary NGAL levels were significantly elevated at 3 and 18 hours after cardiac surgery than non AKI patients [170]. Hasse et al studied plasma NGAL and cystatin C in 100

patients after cardiac surgery and found it to be independent predictor of AKI ,its duration and severity as well as length of ICU stay [171,172].

In studies of Contrast induced nephropathy in both children and adults uNGAL and pNGAL significantly rose much earlier i.e. 2-4 hours of cardiac catheterization than serum creatinine which was found to increase at only 6-24 hours of procedure [173,174].

Urinary NGAL was studied in 140 critically ill children who were on mechanical ventilation. The levels of uNGAL rose 48 hours before a rise in creatinine of 50% or more occurred and they correlated well with worsening Pediatric RIFLE class. The area under the ROC curve for development of AKI for uNGAL was 0.78 while its levels were also predictors for AKI duration of more than 48 hours [175]. Hilde R et al studied 632 ICU patients of which 171 (27%) developed AKI. Plasma and urinary NGAL at admission were significantly related to severity of Aki as determined by RIFLE scores. Also NGAL was an independent predictor of RIFLE 'F' class in multivariate logistic regression model [176].

In a cohort of 635 patients admitted to the Emergency Department ,a single urinary measurement of NGAL had high sensitivity and specificity in detecting AKI . In fact a cutoff value of 130 μg/G creatinine had a sensitivity of 90% and specificity of 99.5% for detecting AKI , which was much higher than N acetyl beta (D) glucosaminidase, fractional excretion of sodium (FeNa) and serum creatinine. In regression analysis uNGAL predicted requirement of dialysis and admission to ICU. Since only 6% of the patients of the cohort were subsequently admitted to the ICU, the possibility of sepsis

acting as a source of extrarenal NGAL and thus confounding measurements of uNGAL is low [177].

Lately quite a few studies have investigated the role of NGAL in differentiating pre-renal and intrinsic AKI and predicting its severity and outcome [178,179,180].Singer et al studied 147 hospitalized patients and found that a cutoff level of uNGAL of more than 104 ng/ml predicted intrinsic AKI (Odds ratio 5.97) while a level of less than 47 ng/ml was in favour of prerenal injury [178].Comparing different biomarkers -NGAL, KIM-1, IL-18 and Cystatin C, Nejat et al showed that uNGAL is best in differentiating Pre-renal from persistent AKI where pre-renal AKI was defined as renal recovery within 48 hours and Fractional excretion of Sodium < 1% [179].

NGAL rises significantly in AKI patients but not in controls [180]. NGAL levels on the day of transplant predicts delayed graft function and dialysis requirement [181].

**Limitations of NGAL:**

Measurements may be influenced by coexisting variables such as pre-existing renal disease, urinary tract infections, malignancy etc .Serum NGAL may be produced in several non renal sites in septic patients with multi-organ failure, leukocytosis, chronic Inflammatory disorders and cancer. Both urine and serum NGAL are elevated in CKD patients and correlate with the severity of CKD stage and predict progression of CKD. Also the relative increase in NGAL is less when such individuals suffer acute injury [182]

.

In critically ill patients NGAL's performance in predicting AKIN 1/RIFLE 'R' as determined by area under ROC curve has been inconsistent with results ranging from 0.50 to 0.93 after cardiac surgery and from 0.54 to 0.99 in general ICU patients [183].This may partly be related to different timings of biomarker measurement and concomitant different sources of NGAL besides the renal tissue. Any inflammatory stimulus like SIRS, surgical stress will cause neutrophils to degranulate besides increasing the synthesis of NGAL in other tissues like lungs and liver [156,160]. This shall increase the filtered load of NGAL which shall appear in urine irrespective of renal damage. Support for this comes from studies that demonstrate increased plasma and urinary levels of NGAL after cardiac surgery without post procedure AKI . Also the urinary NGAL in these patients were found to be homodimeric reflecting their source to be neutrophils [184,185].Finally the current NGAL assays do not differentiate between the monomeric, dimeric and heterodimeric forms of NGAL and thus are not specific for the monomeric tubular cell specific monomer.

**COMBINATION OF BIOMARKERS:**

Koyner et al [186] studied patients undergoing cardiac surgery and showed that while Urinary cystatin C predicted AKI immediately afterward procedure , Neutrophil gelatinase-associated lipocalin had good predictive value within the first 6 hrs post procedure. Similaly Parikh et al measured urinary NGAL and IL 18 in children with post

cardiopulmonary bypass (CPB) AKI .While urinary NGAL rose to 25 fold within 2 h of operation and decreased to normal within 6 h , in comparison, urine IL 18 started increasing after 4 to 6 hours of CPB, peaked with an increase of almost 25 times at 12 h, and remained consistently high even after 48 hours of surgery.[187 ]

This suggests that for diagnosis of AKI with adequate sensitivity and specificity a panel of biomarkers may be better than single biomarker. In fact to put the idea to test nine urinary biomarkers : KIM 1, NGAL, IL 18, cystatin C, NAG, hepatocyte growth factor (HGF), vascular endothelial growth factor (VEGF), chemokine interferon inducible protein 10 and total protein were studied in a heterogenous cohort of 204 patients with or without AKI. It consisted of healthy volunteers, patients undergoing cardiac catheterization and ICU patients.[188 ] In logistic regression model, the area under the ROC curve for AKI prediction for the combination of biomarkers was 0.94 which was consistently greater than for any individual biomarker.

In a systematic metanalysis of 31 studies of AKI biomarkers , Parikh et al reported the qualities of different biomarkers in AKI diagnosis. Twenty one urine and serum biomarkers of AKI were evaluated from studies reported on MEDLINE and EMBASE databases between 2000 and 2006.[189] Urine IL 18, KIM 1and NAG were found to be the best for diagnosing established AKI ,while serum cystatin C, urine NGAL, IL 18 and brush border enzyme glutathione S transferase scored in the early diagnosis of AKI. Finally KIM 1 and IL 18 were the best predictors of mortality risk in patients with AKI.

To summarize a panel of AKI biomarkers and serum markers of GFR like cystatin C may result in a greater potential to identify AKI earlier than we currently can .

# AIMS AND OBJECTIVES

**AIM:**

- To study the clinical profile of incident and prevalent Acute Kidney Injury (AKI) patients in a Medical ICU at a tertiary care centre.

**OBJECTIVE:**

- To study the Renal outcome and Mortality at day 7 of follow up of these patients.
- To study the utility of urinary Neutrophil Gelatinase associated Lipocalin in predicting the severity and outcome of acute kidney injury.
- To distinguish between the characteristics of Transient and Persistent AKI.
- To study the characteristics of patients requiring RRT in this cohort.

## MATERIALS AND METHODS

**Type of study:** Prospective observational cohort study approved by the Institutional review board

**Setting and location:** Departments of Nephrology, Critical care medicine, Christian Medical College, Vellore-632004.

**Study Period:** June – November 2014

**Participants:**

- One hundred and three consecutive patients who had AKI at the time of ICU admission or who developed AKI during ICU stay were recruited in the study over a period of 6 months.

**A) For studying clinical profile:**

**Inclusion criteria:**

- Incident /prevalent AKI patients > 18 year in ICU as per AKIN criteria.

**Exclusion Criteria**

- Pregnant women and children.
- Patients in whom baseline serum creatinine cannot be found prospectively or retrospectively.
- Chronic Kidney Disease patients eGFR < 60 ml/min/$m^2$ BSA prior to current illness.

**B) For studying urinary NGAL**

**Inclusion criteria**

Patients with eGFR > 60 ml/min/ $m^2$ BSA

**Exclusion criteria**

1. Patients in whom baseline serum creatinine cannot be found prospectively or retrospectively
2. Patients with obstructive uropathy.
3. Suspected Urinary tract infection.
4. Patients with CKD i.e .eGFR < 60 ml/min/$m^2$ BSA prior to current illness
5. Pregnant women and children

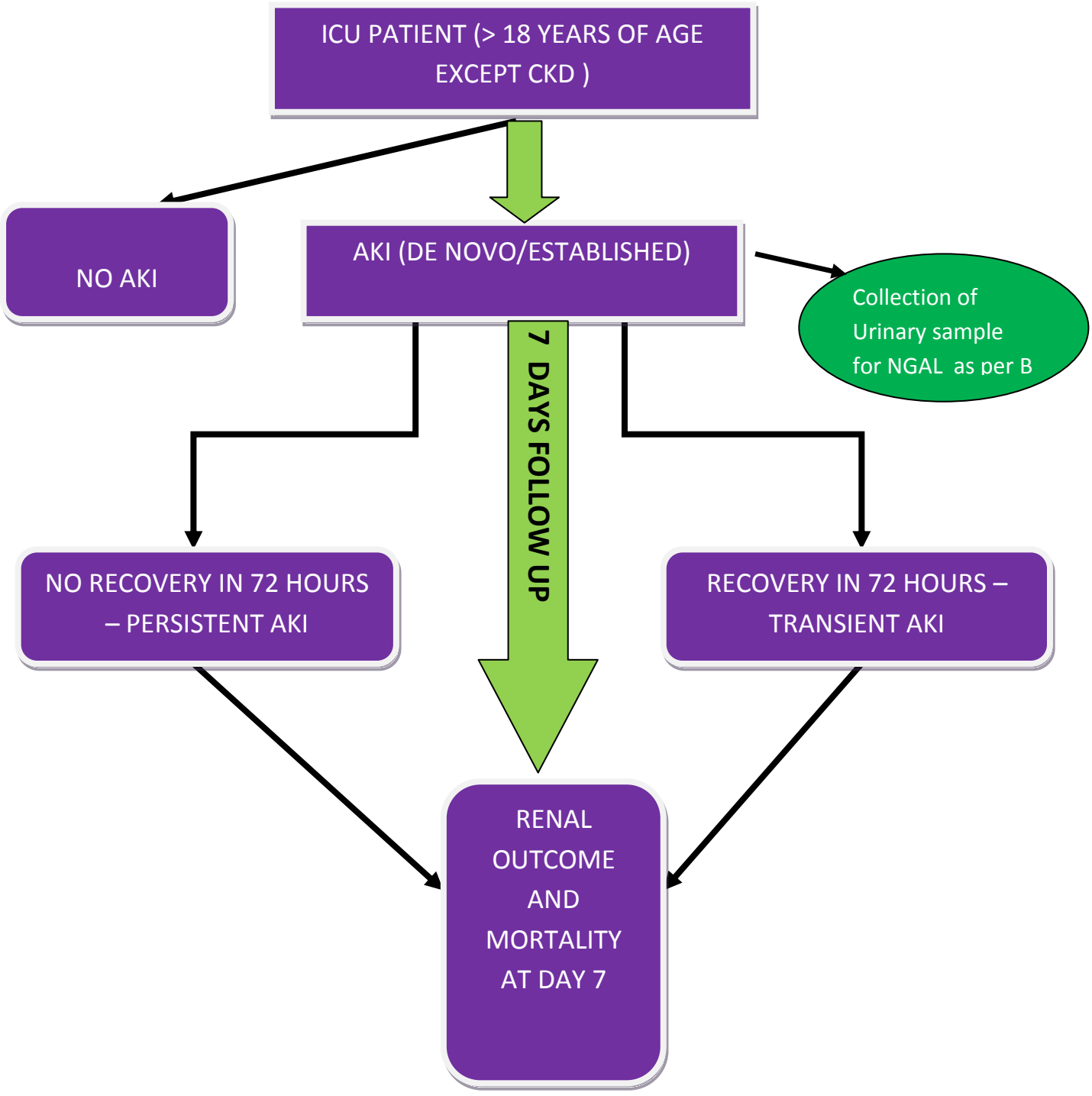
**Data Sources/measurement:**

History and treatment details were noted from the chart records.Baseline creatinine was retrieved from prior records within 3 months. If no previous records were available and if the lowest creatinine attained in the hospital corresponded to GFR >60ml/min/1.73$m^2$,it was considered as baseline creatinine .

Blood pressure, height, weight, BMI, age, gender and other demographic details were noted from the chart records. Serum creatinine, urea, total leukocyte counts, differential counts, liver function test, Urine analysis & microscopy, urine osmolarity and other investigations were noted from electronic records. Fractional excretion of Sodium was calculated as per formula – (Urine Sodium X Plasma Creat)/(Urine creat X Plasma Sodium). Patients were followed up daily with blood and urine collection at inclusion and daily record of renal parameters, hemodynamic variables, Intake/Output, SOFA score, requirement of RRT for next 7 days. Final outcome was recorded from discharge summary as well as from electronic medical records.Urinary Neutrophil Gelatinase

associated Lipocalin was measured with a commercial ELISA kit (BIOPORTO) at Nephrology lab.

**FIG .6: STUDY ALGORITHM**



## METHODS AND DEFINITIONS

## DEFINITIONS

- ACUTE KIDNEY INJURY : As per AKIN criteria (Table 1).
- TRANSIENT ACUTE KIDNEY INJURY: Recovery of renal function (creatinine recovering to within 0.3mg% of baseline) in 72 hours.
- PERSISTENT ACUTE KIDNEY INJURY : Non-Recovery of renal function within 72 hours

1. Fractional excretion of Sodium was calculated on day 1 of inclusion in study as per formula – Urine Sodium X Plasma Creat/Urine creat X Plasma Sodium (Patients who were anuric or on diuretics were not included for fena).
2. SOFA Score was calculated as per the scoring system for the six systems as described below Table 3a-f [190,191] :

**3a.Respiratory System**

| **$PaO_2/FiO_2$ (mmHg)** | **SOFA score** |
|---|---|
| < 400 | 1 |
| < 300 | 2 |
| < 200 **and** mechanically ventilated | 3 |
| < 100 **and** mechanically ventilated | 4 |

**3b. Nervous System**

| **Glasgow coma scale** | **SOFA score** |
|---|---|
| 13–14 | 1 |
| 10–12 | 2 |
| 6–9 | 3 |
| < 6 | 4 |

**3c. Cardio Vascular System**

| **Mean Arterial Pressure OR administration of vasopressors required** | **SOFA score** |
|---|---|
| MAP < 70 mm/Hg | 1 |
| dop <= 5 or dob (any dose) | 2 |
| dop > 5 OR epi <= 0.1 OR nor <= 0.1 | 3 |
| dop > 15 OR epi > 0.1 OR nor > 0.1 | 4 |

*(vasopressor drug doses are in µg/kg/min)*

*Drug abbreviations: dop for dopamine, dob for dobutamine, epi for epinephrine and nor for norepinephrine*.

**3d.Liver**

| **Bilirubin (mg/dl) [µmol/L]** | **SOFA score** |
|---|---|
| 1.2–1.9 [> 20-32] | 1 |
| 2.0–5.9 [33-101] | 2 |
| 6.0–11.9 [102-204] | 3 |
| > 12.0 [> 204] | 4 |

**3e.Coagulation**

| **Platelets×$10^3$/µl** | **SOFA score** |
|---|---|
| < 150 | 1 |
| < 100 | 2 |
| < 50 | 3 |
| < 20 | 4 |

**3f.Renal System**

| Creatinine (mg/dl) [µmol/L](or urine output) | SOFA score |
|---|---|
| 1.2–1.9 [110-170] | 1 |
| 2.0–3.4 [171-299] | 2 |
| 3.5–4.9 [300-440] (or < 500 ml/d) | 3 |
| > 5.0 [> 440] (or < 200 ml/d) | 4 |

3. **Measurement of Urinary NGAL**:

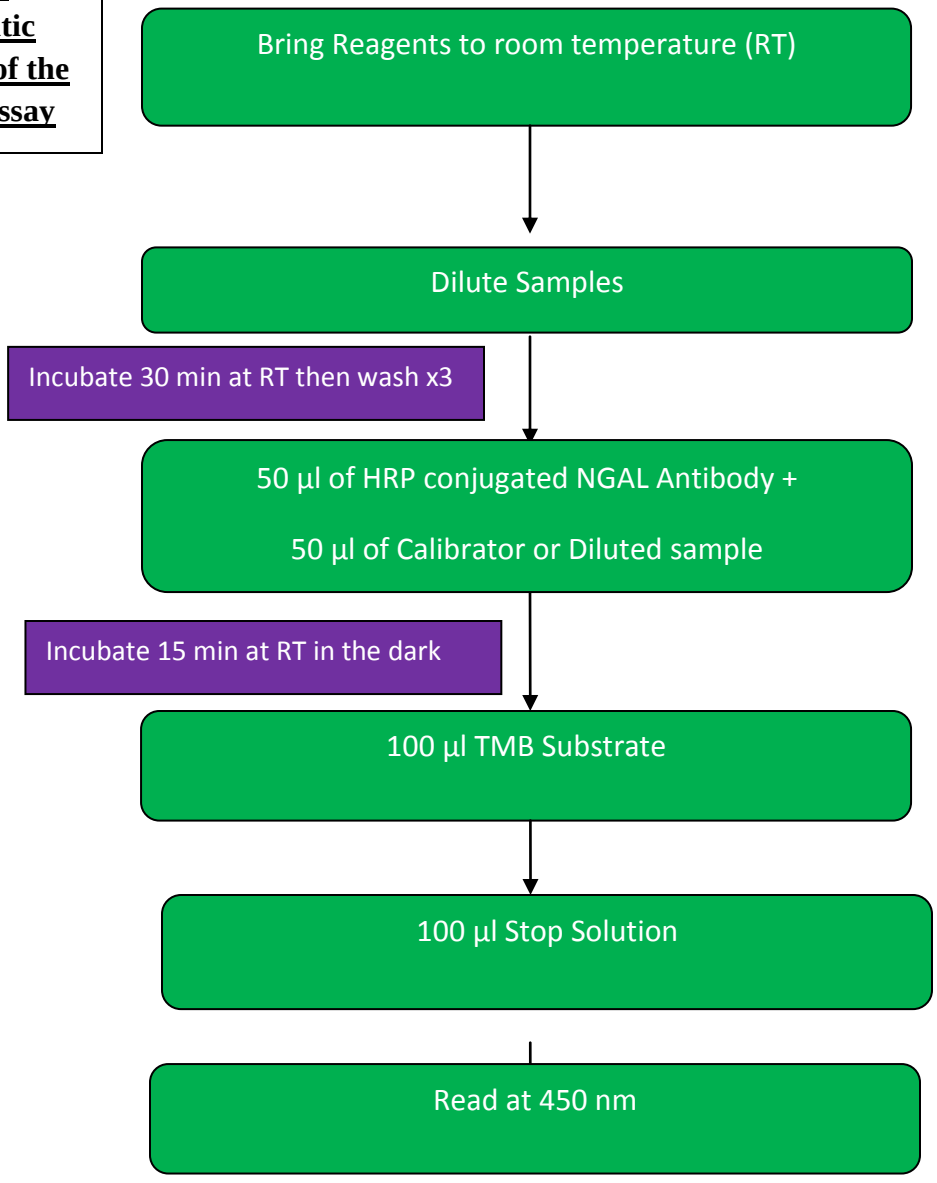
**Principle of assay:** It is ELISA based test done in microwells which are coated with a monoclonal antibody to NGAL.NGAL from sample is captured by the bound antibody and is detected with horse radish peroxidise (HRP) - conjugated anti NGAL antibody after incubating with a chromogen containing Tetramethyl Benizidine(TMB) which acts as a substrate for HRP.

**Asssay Procedure:**

1. The reagents were brought to room temperature.
2. The samples were diluted in appropriate dilutions according to the the expected NGAL concentrations.
3. Fifty microlitre of HRP conjugated NGAL antibody were transferred in the coated microwells followed by rapid transfer of 50 µl of diluted samples, calibrator solution and internal controls into the corresponding wells.
4. The wells were then covered and incubated for 30 minutes on a shaking platform set at 200/ min.

5. After incubation the microwell content was aspirated and washed three times with 300 µl of diluted wash solution.
6. Then 100 µl of TMB substrate was added to each microwell which were then covered and incubated in the dark at room temperature for exactly 15 minutes.
7. Finally 100 µl of Stop solution was added to each well and mixed gently by shaking for 20 seconds and the absorbance of the wells was read at 450 nm within 30 minutes.

**Fig. 7: Schematic overview of the NGAL Assay**



**Methods to minimize bias:**

Cases were indicated with unique protocol ID and not with patient's name or hospital number.

The investigator who measured the Urinary NGAL was blinded to the patient details.

**Statistical methods:**

a. **Sample size calculation:**

Incidence of AKI in ICU during 1 month pilot study was around 50%.

Range of AKI incidence – 30-50% in different studies

Hence Minimum Sample Size = 4 $P*Q/d^2$ = $4*50*50/ 10^2$= 100.

FOR NGAL it is planned to study around 50-75 patients as PILOT project

**Quantitative variables:**

SPSS software version 17 was used for all statistical analysis. Quantitative variables were expressed as Mean ± Standard Deviation or median with range. Categorical variables were expressed as frequency and percentage.

While doing univariate analysis categorical variables were analyzed using Chi square test while continuous variables were analyzed using Student's 't' test/ANOVA. In case of skewed data non parametric tests were used. Pearson's correlation was used to study the strength of association between two continuous variables. Multivariate analysis was done by using regression analysis. All P values were two tailed and less than 0.05 were considered as significant.

## OBSERVATIONS AND RESULTS

One hundred and three consecutive patients who had AKI at the time of ICU admission or who developed AKI during ICU stay were recruited in the study over a period of 6 months as per the protocol (Fig8).

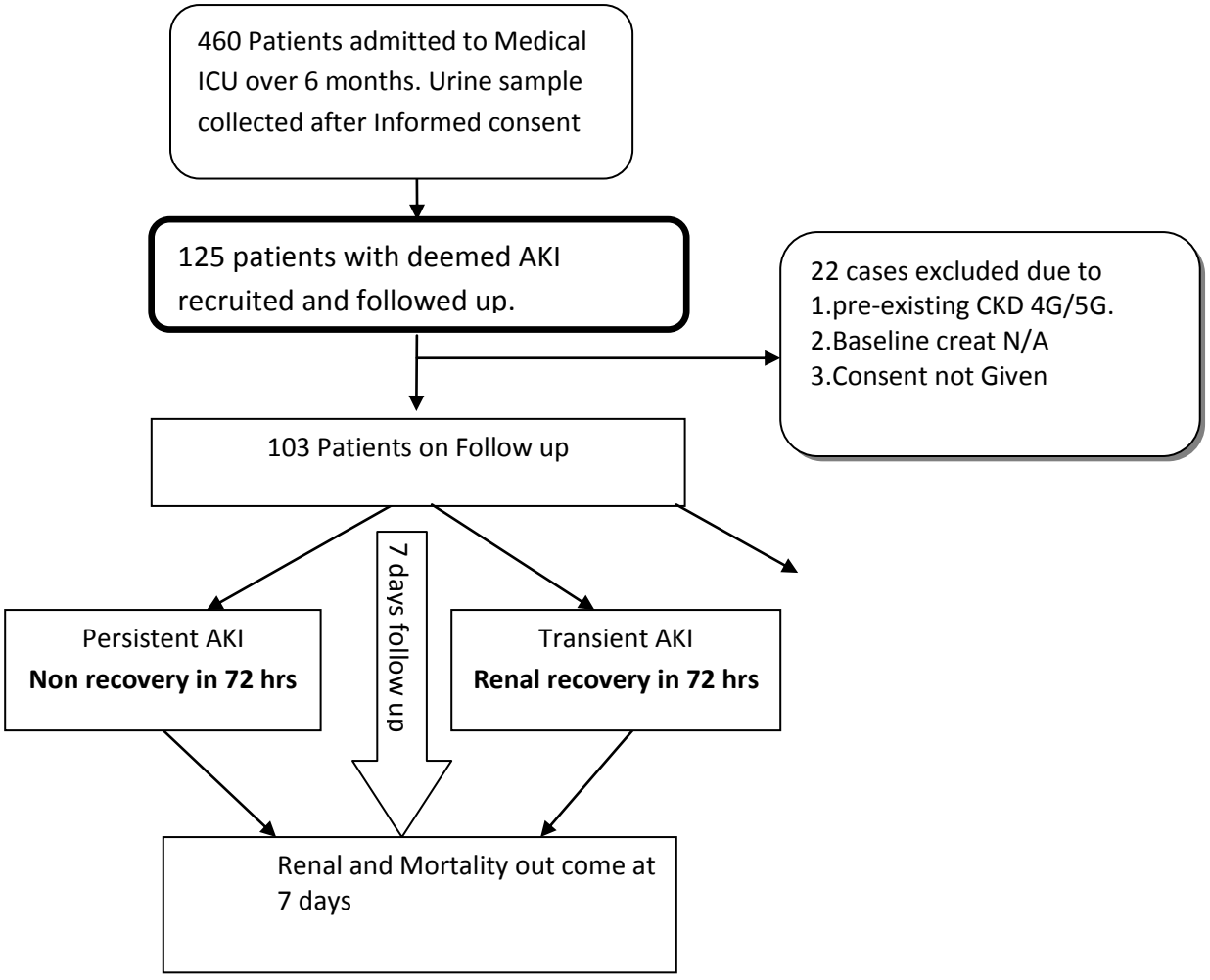



**Fig.8 Study Protocol**

**STUDY POPULATION**: The study population (n=103) consisted of 69 (67%) males and 34 (33%) females with a Male: Female ratio of 2: 1. The mean population age was 48.2 ± 16.4 years .Mean age in both the sexes was similar being 48.6 ± 16.5 for females and 48.0 ± 16.5 for males. The population distribution according to the age groups is shown in Fig.9.

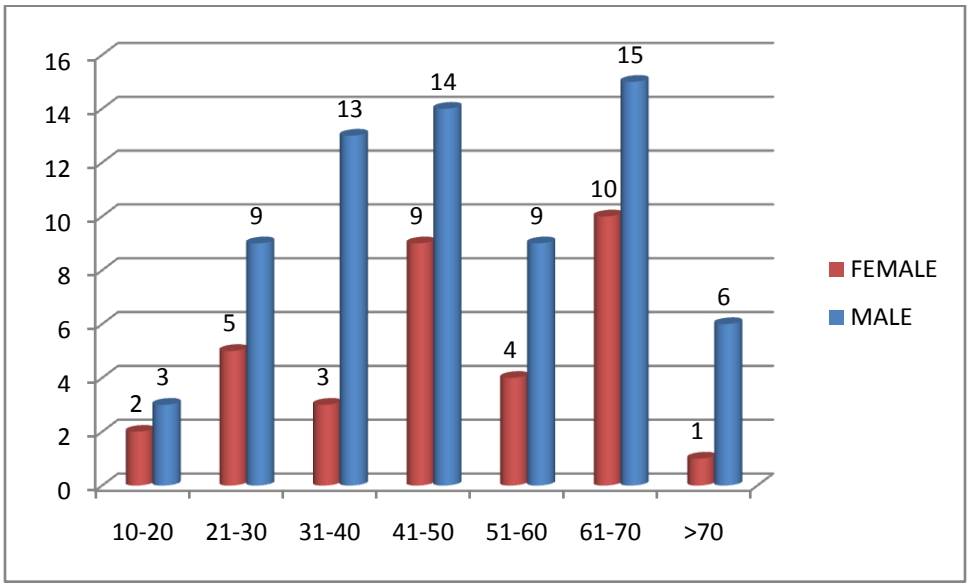



**Fig.9:Age group vs. Sex distribution of study population**

It is noteworthy that 32 (31.1%) patients belonged to the elderly age group defined as more than 60 years of age. This highlights the vulnerability of this age group for acute renal dysfunction superimposed over an already declining GFR . Of these 70 patients (68%) did not have any pre-ICU stay in the hospital and were directly admitted to the ICU form casualty.

**BASELINE CHARACTERISTICS OF STUDY POPULATION**

| **CHARACTERISTICS** | TOTAL N=103 | PERCENTAGE (%) |
|---|---|---|
| **NORMAL RENAL FUNCTION** | 74 | 71.8 |
| **CKD STAGE 1** | 15 | 14.6 |
| **CKD STAGE 2** | 14 | 13.6 |
| **DM** | 31 | 30.1 |
| **HYPERTENSION** | 27 | 26.2 |
| **CAD** | 11 | 10.7 |
| **COPD** | 9 | 8.7 |
| **CVA** | 10 | 9.7 |
| **CLD** | 9 | 8.7 |
| **MALIGNANCY** | 8 | 7.8 |
| **TUBERCULOSIS** | 8 | 7.8 |

**Table 4: Study population comorbidities**

As shown in the Table 4, Diabetes (30.1%) followed by hypertension (26.2%) were the most frequent comorbidities of the ICU population with AKI. Eight (7.8%) patients had associated malignancies of which 50% were haematological in origin. Other comorbidities were CAD (10.7%), COPD (8.7%), CLD (8.7%) and CVA (9.7%). 71.8% of patients had no prior renal dysfunction. Those who were classified as CKD stage 1or 2 were in older age group with GFR corresponding to the age related decline.

| **CHARACTERISTICS** | Mean ± SD | MEDIAN | Minimum | Maximum |
|---|---|---|---|---|
| **Hb (g/dl)** | 11.4±2.9 | 11.3 | 2.9 | 17.7 |
| **TC ($10^3$ per $mm^3$)** | **15.8 ±10.5** | 14.1 | 0.10 | 68.3 |
| **Plt (lacs/$mm^{3)}$** | 1.55±1.17 | 1.35 | 0.08 | 6.09 |
| **Day-1 Urea (mg/dl)** | **79.6±43.6** | 70 | 17 | 198 |
| **Day-1 Creat (mg/dl)** | **2.3±1.3** | 1.8 | 1.1 | 7.3 |
| **Protein (g/dl)** | 6.0±1.3 | 6.1 | 1.6 | 9.5 |
| **Albumin (g/dl)** | **2.9±0.9** | 2.9 | 0.7 | 6.0 |
| **Bilirubin (mg/dl)** | 2.8±5.3 | 1.1 | 0.3 | 39.9 |
| **SGOT (IU/L)** | 501.4±2100.9 | 78 | 17 | 18850 |
| **SGPT (IU/L)** | 137.8±506.6 | 35 | 6 | 4600 |
| **Alk.phos.(U/L)** | 145.9±134.9 | 97 | 22 | 711 |
| **Sodium (mmol/L)** | 137.3±7.9 | 137.0 | 113 | 158 |
| **Potassium (mmol/L)** | 4.0 ±1.0 | 4.0 | 1.1 | 6.3 |
| **Bicarbonate(mmol/L)** | **16.8±6.8** | 16.4 | 3.6 | 38 |
| **Chloride(mmol/L)** | 108.8±7.8 | 107 | 84 | 132 |
| **Lactate(mmol/L)** | **4.2±3.9** | 2.8 | 0.8 | 19.5 |
| **Day 1Urine O/P (ml)** | 1352±953 | 1180 | 10 | 4850 |
| **Day 1 SOFA score** | 10.7±4.3 | 11 | 2 | 19 |
| **uNGAL (ng/ml)** | 4224.8±4586.1 (N=63) | | | |

**Table 5: Clinical Profile at admission**

As seen from Table 5 most patients had high counts at admission , though a few were leukopenic due to presence of aplastic anemia. Mean urea and creatinine at presentation were 79.6±43.6 mg% and 2.3±1.3 mg% respectively. Serum albumin and bicarbonate levels were on the lower side being 2.9±0.9 g% and 16.8±6.8 mmol/L respectively. Significant patients had high lactates at admission averaging to 4.2±3.9 mmol/L. Mean SOFA score at admission was 10.7±4.3. Urinary NGAL was analysed in toal of 63 patients with mean value of 4224.8± 4586.1 ng/ml.

**AKIN STAGE at inclusion:**

At inclusion 38 patients (37 %) were in AKIN 1, 31 (30%) in AKIN 2 and 34 (33%) patients were already in AKIN 3 (Fig.10).

**Fig.10 : AKIN Stage at inclusion**

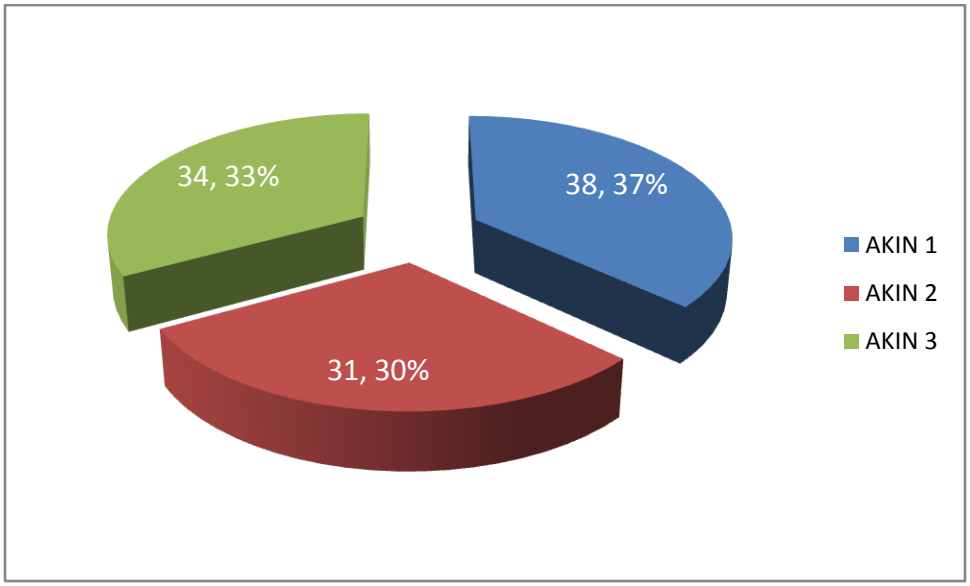


**Table 6 : Baseline comparison between AKIN 1,2 and 3**

| CHARACTERISTICS | AKIN 1.00 (N=38) | AKIN 2.00 (N=31) | AKIN 3.00 (N=34) | P VALUE |
|---|---|---|---|---|
| | Mean± SD | Mean± SD | Mean± SD | |
| **AGE** | 48.3±15.6 | 47.1±16.1 | 49.5±17.8 | 0.85 |
| **Hb (g/dl)** | 11.3 ±3 | 10.9±2.8 | 11.9±2.6 | 0.478 |
| **TC ($10^3$ per $mm^3$)** | 17.1 ±11.1 | 13.9± 9.2 | 16.7±11.9 | 0.410 |
| **Plt (lacs/$mm^{3)}$** | **2.1 ±1.1** | **1.5 ±1.3** | **1.0±0.7** | **<0.001** |
| **Day-1 Urea (mg/dl)** | **52.1±27.8** | **78.9±38.1** | **108.4±45.0** | **<0.001** |
| **Day-1 Creat (mg/dl)** | **1.46±0.55** | **2.04±0.82** | **3.56±1.43** | **<0.001** |
| **Protein (g/dl)** | **6.4±1.2** | **5.9±1.5** | **5.5±1.0** | **0.018** |
| **Albumin (g/dl)** | **3.3±0.9** | **2.7±0.8** | **2.5±0.6** | **<0.001** |
| **Bilirubin (mg/dl)** | 2.7±4.7 | 2.8±7.0 | 3.0±4.1 | 0.951 |
| **AST (IU/L)** | 166±296 | 377±1337 | 986 ±3384 | 0.238 |
| **ALT (IU/L)** | 63±88 | 122 ±414 | 235 ±782 | 0.351 |
| **Alk.phos.(U/L)** | 143 ±173 | 142 ±92 | 151±119 | 0.96 |
| **Sodium (mmol/L)** | 138±8.5 | 136 ±7.7 | 137±7.5 | 0.549 |
| **Potassium (mmol/L)** | 3.7±0.9 | 4.0±1.1 | 4.3±0.8 | 0.062 |
| **Bicarbonate(mmol/L)** | 18.4±7.0 | 16.5±7.0 | 15.3±6.3 | 0.152 |
| **Chloride(mmol/L)** | 109.4±8.6 | 108.3±7.1 | 108.0±7.7 | 0.824 |
| **Lactate(mmol/L)** | 3.7±4.5 | 4.4±3.1 | 4.7±3.9 | 0.547 |
| **pH** | **7.31±0.13** | **7.31±0.14** | **7.23±0.15** | **0.023** |
| **Day 1 SOFA score** | **8.3±3.6** | **10.7±3.7** | **13.4±4.1** | **<0.001** |
| **Day 1Urine O/P (ml)** | **1701±997** | **1214±699** | **1081±1010** | **0.014** |

Table 6 shows the comparison of baseline parameters between different AKIN stages using One way ANOVA. Age , haemoglobin ,total leukocyte counts ,total bilirubin ,AST,ALT ,Sodium , bicarbonate, chloride and lactate levels were not different between the three groups. However serum urea and creatinine were found to be significantly different between all three groups in the post hoc analysis of One way ANOVA. Similarly SOFA score at admission was significantly different between all three AKIN stages.

Platelet count, day 1 urine output, serum protein had significant P value in ANOVA, but the post hoc analysis showed that the difference in their values was significant only between AKIN 1 and AKIN 3 stages ,while AKIN 1vs 2 and AKIN 2 vs 3 were not significantly different .Serum Albumin was significantly higher in AKIN 1 patients as compared to both AKIN 2 and AKIN 3 separately.

**Table 7 Urinary NGAL between AKIN stages**

| | AKIN 1.00 (N=19) | AKIN2.00 (N=22) | AKIN 3.00 (N=22) | P VALUE |
|---|---|---|---|---|
| **UNGAL (ng/ml)** | **1270.2±1659.5** | **4865.9±4992.3** | **6135±4586.1** | **0.001** |

Urinary NGAL (UNGAL) was compared across different AKIN stages .The mean values were significantly different between AKIN stage 1 and AKIN stage 2 (P= 0.024) and highly significant on comparing AKIN 1 and AKIN 3 (P=0.001). However there was no significant difference between AKIN 2 and AKIN 3.

A pearson correlation coefficient of 0.212 was found between UNGAL and serum creatinine with a two tailed p value of 0.085.

## CAUSES OF ACUTE KIDNEY INJURY:

In most of the patients the AKI was multifactorial in nature.The most common causes was sepsis (58.3%) followed by drugs (17.5%),Pigment nephropathy due to hemolysis/rhabdomyolysis (15.5%),Scrub Typhus (15.5%), Cardio-renal syndrome (11.7%) and snake envenomenation (5.8%) as depicted in Fig.11.Common drugs associated with AKI were aminoglycosides, NSAIDS, Colistin, ACE/ARB's ,

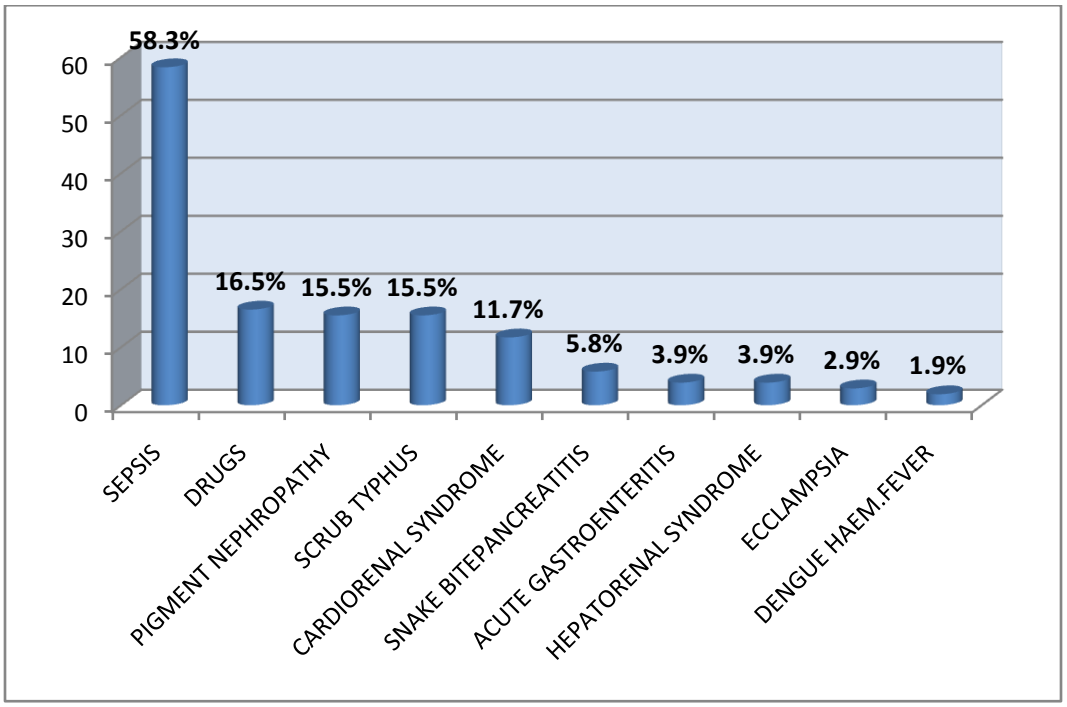



**Fig.11 Causes of Acute Kidney Injury**

Less common causes included Acute pancreatitis (3.9%),Hepatorenal syndrome (2.9%),Acute gastroenteritis (3.9%). There were 2 (1.9%) cases of Acute Pyelonephritis, Dengue Hemorrhagic fever each and one Tumour Lysis syndrome related AKI.

Mean urine output was 1021±730 ml/day in septic AKI patients which was significantly lower, than those with other causes 1481±1100 (p= 0.015).Hospital stay in septic AKI patients was 18.23+ 29.26 while it was only 11.66+9.22 in those with other causes (P=0.181).The albumin levels in septic AKI patients was 2.66+0.92 while it was 3.00+0.83 in those with other causes (P=0.040) .43.6% of patients with septic AKI expired as compared to 27.4% mortality in Non septic AKI ( P = 0.094).Mean urinary NGAL levels were 7011 ± 7025ng/ml in patients with septic AKI while they were 3806 ± 4976 in AKI due to other causes (p=0.063).

## TRANSIENT VERSUS PERSISTENT ACUTE KIDNEY INJURY

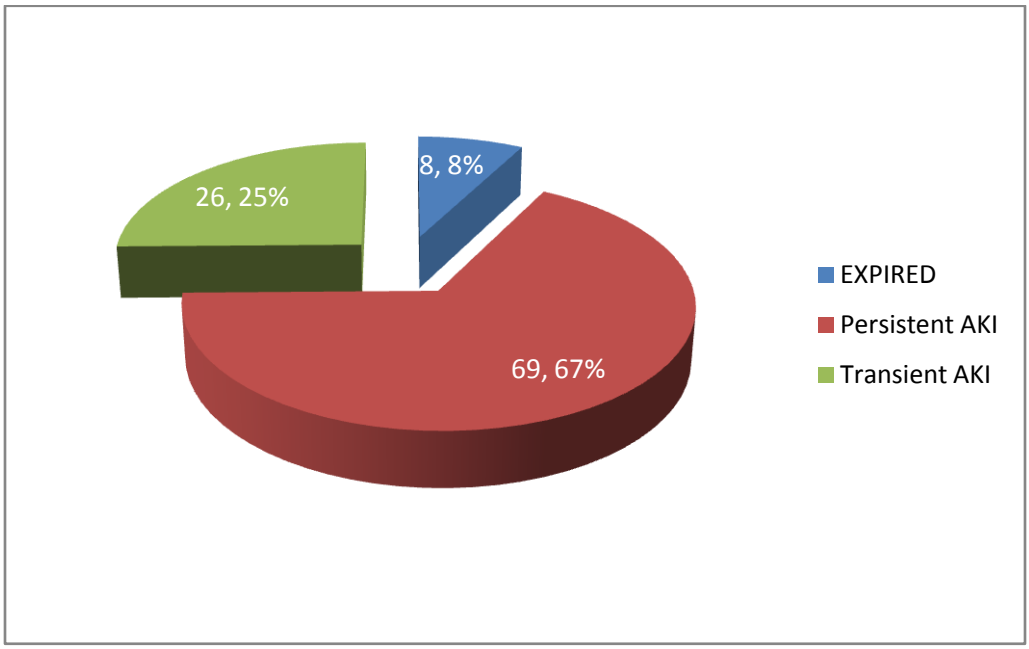



**Fig.12 Transient & Persistent AKI Population distribution**

As shown in Fig.12, 25% (26) patients recovered their renal function completely within 72 hours , 8 patients expired prior to 72 hours while 69(67%) patients had persistent renal dysfunction .Important to note here is that except for 1 patient all of the patients with Transient AKI did not have any pre-ICU hospital stay and were directly admitted to the ICU from Emergency.

Table 8 shows that none of the comorbidities i.e.Diabetes , hypertension, Coronary Artery Disease (CAD),Chronic Obstructive Pulmonary disease (COPD), Cerebro Vascular Disease (CVA), Chronic Liver Disease (CLD) were significantly different

between the Transient and Persistent AKI groups. Of note, Fractional excretion of Sodium (FeNa) was less than 1 in significantly greater number of patients with Transient AKI and none of them required Hemodialytic support. Also 72% (18) patients with Transient AKI were in AKIN stage 1 while only 24.3% (17) patients had AKIN 1 at inclusion (P<0.001).

| Characteristics | TRANSIENTAKI (N=26) | PERSISTENTAKI (N=69) | p- value |
|---|---|---|---|
| Male | 17 (68%) | 45 (64.3%) | 0.738 |
| Diabetes | 6 (24%) | 24 (34.3%) | 0.342 |
| Hypertension | 8 (32%) | 18 (25.7%) | 0.545 |
| CAD | 2 (8%) | 7 (10%) | 0.769 |
| COPD | 2 (8%) | 7 (10%) | 0.769 |
| CLD | 3 (12%0 | 5 (7.1%) | 0.453 |
| CVA | 1 (4%) | 7 (10%) | 0.354 |
| AKIN 1 | **18 (72%)** | **17 (24.3%)** | **<0.001** |
| Hemodialysis | **0** | **25 (36.2%)** | **<0.001** |
| FeNa<1[a] | **15 (65.2%)** | **15 (34.9%)** | **0.018** |

***a: For FeNa N=23 for Transient and 43 for persistent AKI***

**Table 8 : Baseline Characteristics of Transient and Persistent AKI**

As shown in Table 8 FeNa could be performed in a total of 66 patients ,23 in Transient AKI and 43 in Persistent AKI group. Of the Transient AKI group 65.2% (15) patients had FeNa less than 1 suggestive of Pre renal AKI.

| Characteristics | TRANSIENTAKI(N=26) Mean ± SD | PERSISTENTAKI(N=69) Mean ± SD | p-value |
|---|---|---|---|
| **Age** | 43.6 ±16.3 | 49.1 ± 15.5 | 0.130 |
| **Hb (g/dl)** | 12.2 ±3.2 | 10.9 ±2.7 | 0.066 |
| **TC ($10^3$ per $mm^3$)** | **19.9 ±10.7** | **14.5 ±10.5** | **0.028** |
| **Plt (lacs/$mm^{3)}$** | **2.3 ±1.3** | **1.3 ±1.04** | **<0.001** |
| **Day-1 Urea (mg/dl)** | **56.4 ±27.8** | **89.9 ±46.1** | **<0.001** |
| **Day-1 Creat (mg/dl)** | **1.43 ±0.33** | **2.65 ±1.43** | **<0.001** |
| **Protein (g/dl)** | **6.8 ±0.7** | **5.7 ±1.3** | **<0.001** |
| **Albumin (g/dl)** | **3.4 ± 0.7** | **2.6± 0.9** | **<0.001** |
| **Bilirubin (mg/dl)** | 3.0±5.2 | 2.9 ±5.7 | 0.892 |
| **AST (IU/L)** | 135 ±259 | 673 ±2553 | 0.288 |
| **ALT (IU/L)** | 62 ±80 | 171 ±613 | 0.370 |
| **Alk.phos.(U/L)** | 123 ±131 | 157± 136 | 0.278 |
| **Sodium (mmol/L)** | 139 ± 8.4 | 136 ± 8.0 | 0.108 |
| **Potassium (mmol/L)** | **3.7 ±1.0** | **4.1 ± 0.9** | **0.031** |
| **Bicarbonate(mmol/L)** | **19.3 ±6.5** | **15.9 ± 6.4** | **0.025** |
| **Chloride(mmol/L)** | 110 ± 7.7 | 109 ± 8.0 | 0.302 |
| **Lactate(mmol/L)** | **2.3 ± 1.9** | **4.7 ± 4.1** | **<0.001** |
| **pH** | **7.37 ± 0.09** | **7.28 ± 0.15** | **<0.001** |
| **Day 1 SOFA score** | **7.7 ±4.0** | **11.5 ±3.9** | **<0.001** |
| **Day 1Urine O/P (ml)** | **1751± 889** | **1166 ± 875** | **0.005** |
| **ICU stay (days)** | 6.4±4.6 | 8.0 ± 7.2 | 0.308 |

| Characteristics | **TRANSIENTAKI(N=26) Mean ± SD** | **PERSISTENTAKI(N=69) Mean ± SD** | **p-value** |
|---|---|---|---|
| **UNGAL ng/ml** | **1078.4 ±1702.5** (N=23) | **5292.9 ± 4913.5** (N=40) | **<0.001** |
| **FeNa %** | **1.6 ± 2.0** (N=23) | **6.5 ± 11.3** (N=43) | **0.008** |

**Table 9 Baseline Clinico-laboratory characteristics in Transient and Persistent AKI**

Table 9 shows the clinical and lab parameters of patients with Transient and Persistent AKI. Mean age , hemoglobin , total bilirubin ,AST,ALT ,Alkaline Phosphate ,Sodium, Chloride were not significantly different between the groups. Length of ICU stay was also not different .In comparison total leukocyte count (P=0.028), serum potassium (P=0.031), serum bicarbonate (P=0.025) and fractional excretion of sodium (P=0.008) was significantly different between the groups.

Patients with Transient AKI had higher mean serum protein and albumin levels and lower mean urea and creatinine concentration than Persistent AKI patients all of which had highly significant P value of <0.001 on Independant ‘t’ test. Persistent AKI patients had significantly more acidosis (<0.001) and higher lactate levels (<0.001) at presentation and a lower urine output than their counterparts (P=0.005).

On comparison of SOFA scores at inclusion Transient AKI patients were definitely less sick with mean score of 7.7 ±4.0 as compared to patients with persistent renal dysfunction with score of 11.5 ±3.9 (P<0.001)

Mean urinary NGAL levels were significantly much lower in Transient AKI i.e. 1078.4 ±1702.5 ng/ml than in Persistent AKI group i.e.5292.9 ± 4913.5 ng/ml (P< 0.001).Thus urinary NGAL levels at inclusion were predictive of renal recovery in univariate analysis.

## OUTCOMES AT DAY 7

1. **Overall outcome:** Of the total 103 patients included in the study two patients were discharged against Medical advice (DAMA) while 23.3%% (23) expired before day 7.An additional 10 patients expired on day 7 taking the total toll to 34 ( 33%). (Fig.13)

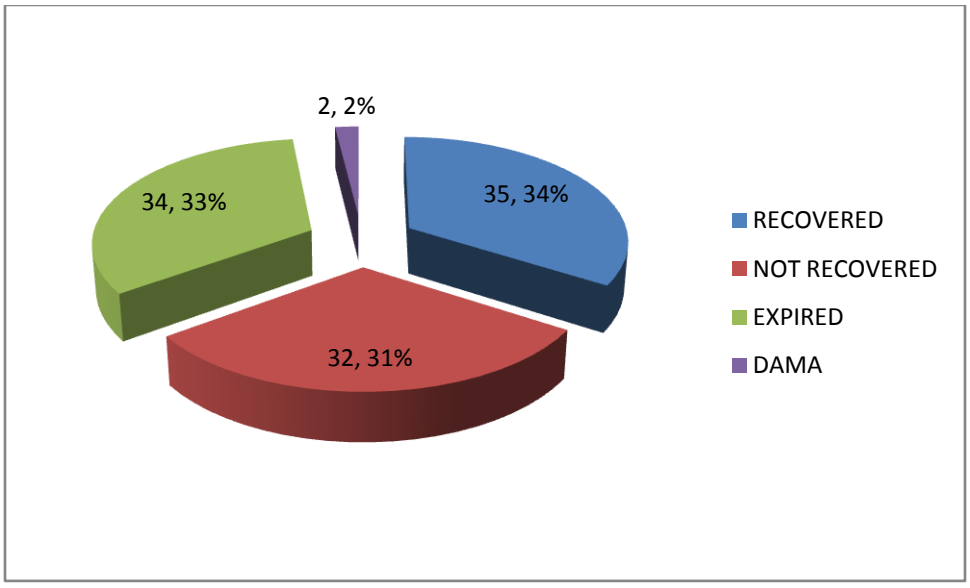



**Fig.13 Overall outcome at day 7**

34% (35) had complete renal recovery while 31% (32) had persistence of renal dysfunction at day 7.Thus 52.2% of the survivors had renal recovery by day 7.

2**. Renal outcome:** As mentioned above 52% of the surviving study patients recovered renal function completely at day 7 leaving an 48% with non recovery. Tables 10 and 11 illustrate the characteristics of the two groups.

| Characteristics | RECOVERED (N=35) | NOT RECOVERED(N=32) | p- value |
|---|---|---|---|
| Male | 24(68.6%) | 18(56.3%) | 0.298 |
| Diabetes | **8 (22.9%)** | **16 (50.0%)** | **0.021** |
| Hypertension | 11(31.4%) | 10(31.3%) | 0.987 |
| CAD | 4(11.4%) | 4(12.5%) | 0.893 |
| COPD | 2(5.7%) | 4(12.5%) | 0.235 |
| CLD | 2(5.7%) | 1(3.7%) | 0.944 |
| CVA | 3 (8.6%) | 4(12.5%) | 0.414 |
| AKIN 1 | **19 (54.3%)** | **8(25.0%)** | **0.015** |
| Normal baseline GFR | **32 (91.4%)** | **18 (60.0%)** | **0.003** |
| Hemodialysis | **1 (2.9%)** | **14 (43.8%)** | **<0.001** |
| FeNa<1[a] | **17(65.4%)** | **6 (30.0%)** | **0.017** |

***a: For FeNa, N=26 for Recovered and 20 for Not Recovered***

**Table 10 : Characteristic of patients with renal recovery vs non recovery at day 7**

As can be seen from Table 10 Diabetic patients were more likely to have persistent renal dysfunction even after 7 days of follow up (P=0.021).Patients who recovered renal function had significantly greater normal baseline renal function i.e no underlying CKD (P=0.003) and more number were in AKIN 1 at presentation than those who didn't recover (P=0.015).

| Characteristics | RECOVERED (N=35) Mean ± SD | NOT RECOVERED (N=32) Mean ± SD | p- value |
|---|---|---|---|
| **Age (years)** | 47±16.0 | 53 ± 16 | 0.193 |
| **Hb (g/dl)** | 11.8 ±2.9 | 11.1 ±2.8 | 0.306 |
| **TC ($10^3$ per $mm^3$)** | 17.8 ±7.8 | 18.8 ±12.4 | 0.893 |
| **Plt (lacs/$mm^{3)}$** | **2.2 ±1.4** | **1.4 ±1.1** | **0.015** |
| **Day-1 Urea (mg/dl)** | **66 ±35** | **95 ±48** | **0.009** |
| **Day-1 Creat (mg/dl)** | **1.76 ±0.74** | **2.95 ±1.59** | **<0.001** |
| **Protein (g/dl)** | 6.4 ±0.9 | 5.9 ±1.1 | 0.084 |
| **Albumin (g/dl)** | 3.1 ± 0.8 | 2.8± 0.8 | 0.115 |
| **Bilirubin (mg/dl)** | 3.4±5.2 | 1.8 ±2.2 | 0.118 |
| **AST (IU/L)** | 147 ±212 | 436 ±1321 | 0.237 |
| **ALT (IU/L)** | 75 ±90 | 136 ±410 | 0.396 |
| **Alk.phos.(U/L)** | 123 ±93 | 151± 142 | 0.340 |
| **Sodium (mmol/L)** | **140 ± 7.5** | **135 ± 8.3** | **0.008** |
| **Potassium (mmol/L)** | **3.8 ±1.0** | **4.4 ± 0.9** | **0.030** |
| **Bicarbonate(mmol/L)** | 18.8 ±6.9 | 16.1 ± 6.4 | 0.105 |

| Characteristics | **RECOVERED** **Mean ± SD** | **NOT RECOVERED** **Mean ± SD** | **p-value** |
|---|---|---|---|
| **Chloride(mmol/L)** | **112 ± 8.1** | **107 ± 7.8** | **0.008** |
| **Lactate(mmol/L)** | **2.5 ± 1.7** | **4.4 ± 3.9** | **0.011** |
| **pH** | **7.36 ± 0.11** | **7.28 ± 0.15** | **0.012** |
| **Day 1 SOFA score** | 9.1 ±434 | 10.9 ±4.3 | 0.079 |
| **Day 1Urine O/P (ml)** | 1529± 764 | 1151 ± 1024 | 0.089 |
| **ICU stay (days)** | 7.8±5.8 | 9.3 ± 9.3 | 0.422 |
| **UNGAL ng/ml** | **1797.6 ±2589.4** (N=26) | **4180.1 ± 4775.4** (N=24) | **0.037** |
| **FeNa %** | **2.0 ± 2.7** (N=26) | **10.4 ± 15.4** (N=20) | **0.026** |

**Table 11: Clinical and Lab parameters of patients with renal recovery vs non recovery at day 7**

Table 11 shows that mean serum urea and creatinine levels were 95 ±48 mg/dl and 2.95 ±1.59 mg/dl respectively in those who had persistent renal dysfunction at day 7.These were significantly much higher than those who completely recovered their renal function by day 7($P<0.01$).

Also it can be deduced form the table that patients who did not recover renal function by day 7 had significantly worse acidosis ($P=0.012$) with greater accumulation of lactates ($P=0.011$) at presentation than those who had complete renal recovery. They also had

significantly lower mean serum sodium and chloride levels but higher serum potassium levels.

Mean Urinary NGAL levels were 1797.6 ±2589.4 ng/ml in the group who recovered renal function, being significantly lower as compared to 4180.1 ± 4775.4 ng/ml in those who did not recover (P=0.037).Fractional excretion of sodium was also significantly higher in the patients who did not recover their renal function by day 7.

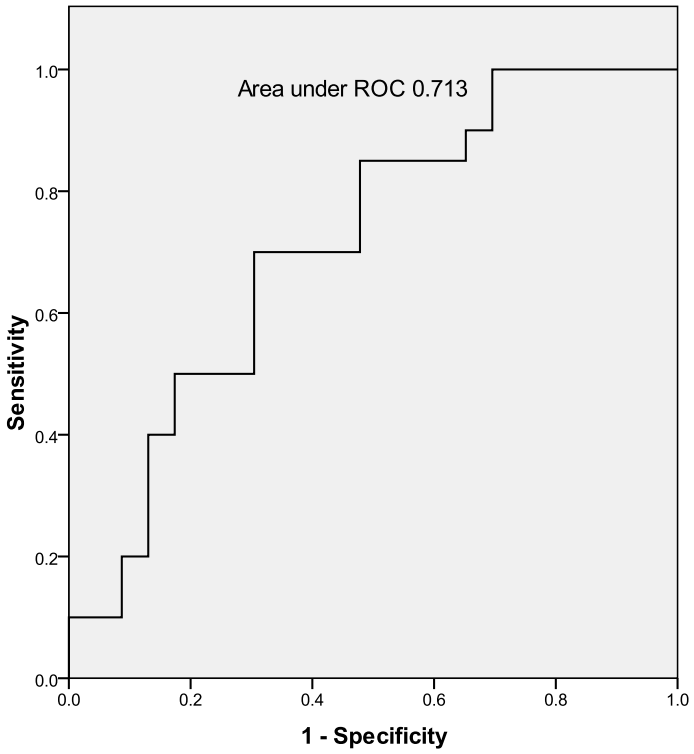



**Fig. 14 ROC curve for urinary NGAL for prediction of renal outcome at day 7**

The performance of urinary NGAL for predicting non recovery of renal function at day 7 revealed the area under ROC curve of 0.713.

**SOFA score and renal outcome :** As can been seen except for SOFA score at day 1 all subsequent SOFA scores were significantly associated with Renal outcome at day 7.Table 12 shows the mean SOFA scores on day 2 to day 7 compared between the patients with renal recovery and those with persistent renal dysfunction .Mean scores were significantly lower in patients who recovered renal function by day 7 (P<0.01).

**Table 12 SOFA score and Renal outcome at day 7**

| **Characteristics** | **RECOVERED (N=35)** **Mean ± SD** | **NOTRECOVERED (N=32)** **Mean ± SD** | **p- value** |
|---|---|---|---|
| SOFA 2 | 7.3±4.5 | 11.4 ± 4.6 | **<0.001** |
| SOFA 3 | 7.0 ±4.8 | 10.9 ±4.4 | **0.002** |
| SOFA 4 | 5.4 ±3.6 | 9.6 ±3.6 | **<0.001** |
| SOFA 5 | 4.4 ±2.9 | 8.6 ±3.3 | **<0.001** |
| SOFA 6 | 3.6 ±2.8 | 8.0 ±4.0 | **<0.001** |
| SOFA 7 | 3.0 ±2.8 | 7.0 ±4.6 | **0.001** |

**Multivariate analysis of Renal out come at Day 7:** Using binary logistic regression with backward conditional method a model was made for predicting renal outcome at day 7 with a predictive power of 71% (Table 13).The variables which play a significant role in predicting renal outcome are Diabetes Mellitus, SOFA score at day 2 and absence of pre-existing CKD. Serum lactate , Hemodialysis requirement and serum potassium,

urinary NGAL, day 1 Urea and creatinine, though significant in univariate analysis were not found to be independant predictors of renal outcome at day7 in multivariate analysis.

| -2 Log likelihood | Cox & Snell R Square | Nagelkerke R Square |
|---|---|---|
| 39.150[a] | 0.534 | 0.712 |

**Table 13 : Goodness of Fit of Model**

| | B | SE | Wald | Sig | Exp(B) |
|---|---|---|---|---|---|
| **DM(1)** | **-2.659E+00** | **0.970** | **7.517** | **0.006** | **0.070** |
| **No CKD** | **-2.574E+00** | **1.070** | **5.785** | **0.016** | **0.076** |
| **Lactate** | 0.303 | 0.223 | 1.836 | 0.175 | 1.353 |
| **HD(1)** | -2.277E+01 | 9615.5 | .000 | 0.998 | 1.287E-10 |
| **Potassium** | -6.980E-01 | 0.510 | 1.875 | 0.171 | 0.498 |
| **SOFA day2** | **0.24** | **0.110** | **4.796** | **0.029** | **1.272** |
| **Constant** | 25.3 | 9615.5 | .000 | 0.998 | 9.731E+10 |

**Table 14: Regression model predicting Renal outcome at day 7**

**Renal replacement Therapy requirement:** Twenty nine patients (28.2%) required hemodialytic support. Associated comorbidities Diabetes , hypertension, Coronary Artery Disease (CAD),Chronic Obstructive Pulmonary disease (COPD), Cerebrovascular Disease (CVA), Chronic Liver Disease (CLD) were not associated with requirement of

RRT.AKIN stage > 1 was a significant factor predicting hemodialysis requirement in next 7 days.

Table 15 shows that patients initiated on hemodialysis had significantly higher mean day 1 Urea (P=0.032 ) and creatinine values (P<0.001).They were also having significantly higher potassium levels and also had significant lactic and metabolic acidosis at presentation.

| Characteristics | No Hemodialysis (N=74) Mean ± SD | Hemodialysis (N=29) Mean ± SD | p- value |
|---|---|---|---|
| **Age (years)** | 49.7±15.9 | 44.9 ± 17.3 | 0.180 |
| **Day-1Urea (mg/dl)** | **73 ±42** | **94 ±45** | **0.032** |
| **Day-1Creat (mg/dl)** | **1.97 ±1.02** | **3.25 ±1.57** | **<0.001** |
| **PotassiumDay 1 (mmol/L)** | **3.84±0.89** | **4.35±1.03** | **0.014** |
| **Bicarbonate Day 1 (mmol/L)** | **18.6±6.7** | **12.5±5.0** | **<0.001** |
| **pH Day 1** | **7.32±0.13** | **7.19±0.15** | **<0.001** |
| **Lactate Day 1 (mmol/L)** | **3.6±3.6** | **6.1±4.4** | **0.005** |
| **SOFA 1** | **10.0 ±4.1** | **12.3 ±4.3** | **0.014** |
| **SOFA 2** | **9.8 ±4.8** | **13.1 ±4.4** | **0.002** |
| **SOFA 3** | **3.0 ±2.8** | **7.0 ±4.6** | **0.002** |
| **U NGAL( ng/ml)** | **3130±3814** | **6470±5668** | **0.034** |
| **FeNa %** | **2.8±3.5** | **10.1± 14.9** | **0.038** |

**Table 15: Clinico-biochemical parameters associated with RRT requirement**

Mean SOFA scores at Day 1, Day2 and Day 3 were also significantly higher for patients who underwent haemodialysis with P value <0.014, 0.002 and0.002 respectively. On evaluating urinary NGAL levels, mean values were 6470±5668 ng/ml in patients requiring Hemodialysis while they were 3130±3814 in patients not requiring RRT. The levels were significantly different between the two groups (P=0.038).Also mean FeNa % was significantly higher in patients requiring RRT.

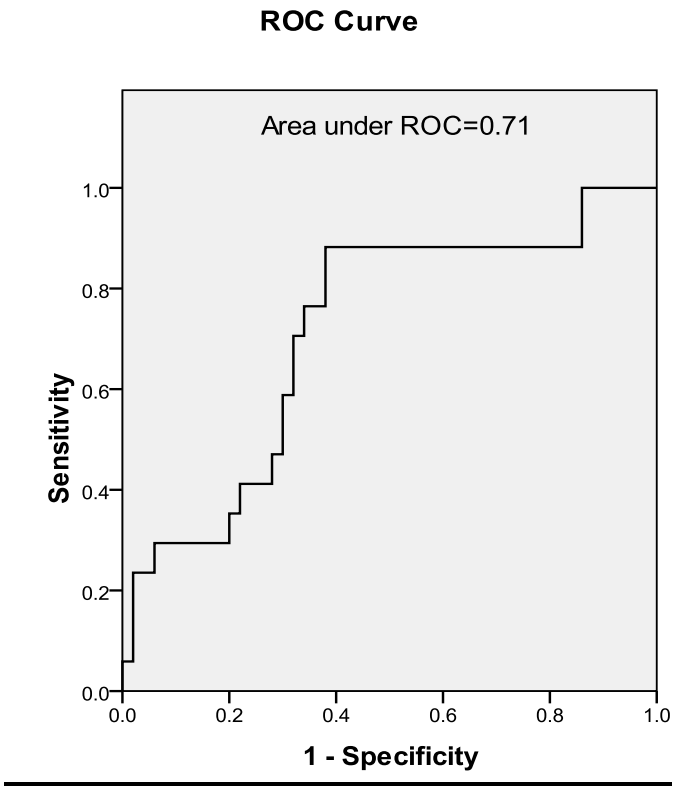



**Fig.15: ROC curve for NGAL predicting RRT requirement**

As shown in Fig.15 urinary NGAL was a good predictor of RRT requirement in ICU patients with AKI with an area under the ROC curve of 0.71.

**Mortality Outcome :** After censoring the two patients who went DAMA ,34 (34%) out of the remaining 101 patients expired within next 7 days of follow up. Fig. 16 shows the temporal profile of mortality .As can be seen, except for days 1 and 3 the mortality rate was more or less uniform in the study cohort.

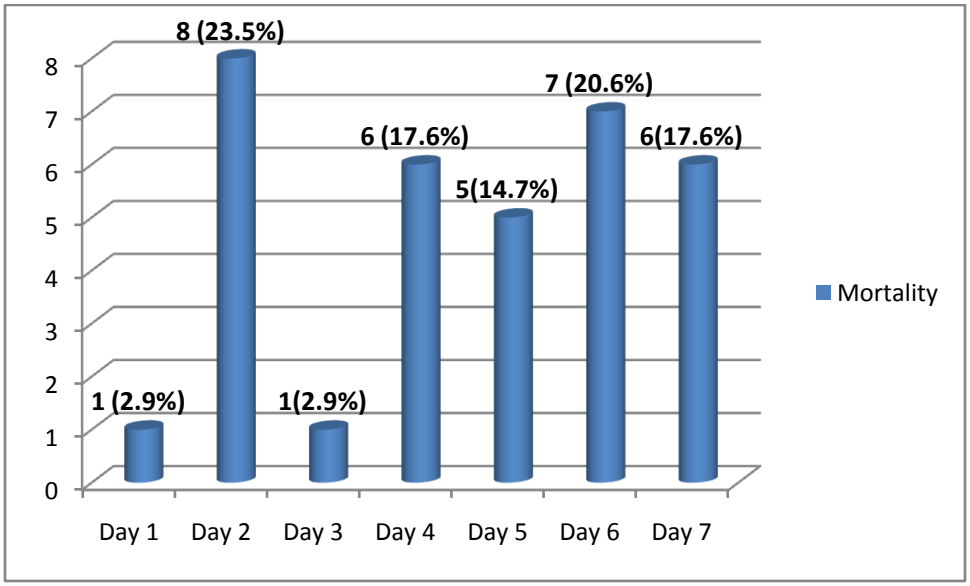



**Fig.16 Mortality on days 1-7**

On univariate analysis age ,sex AKIN stage >1 ,Day 1 urea and creatinine , total bilirubin ,albumin, AST,ALT and Alkaline Phosphatase and comorbidities including CAD, COPD,CVA ,DM and hypertension were not significantly associated with mortality.(Table 16)

| Characteristics | EXPIRED (N=34) Mean ± SD or N% | NOT EXPIRED (N=67) Mean ± SD or N% | p- value |
|---|---|---|---|
| **Age (years)** | 47±16.0 | 53 ± 16 | 0.193 |
| **Male** | 26 (76.5%) | 42(62.7%) | 0.163 |
| **CLD** | **6(17.6%)** | **3 (4.5%)** | **0.028** |
| **AKIN Stage > 1** | 23 (67.6%) | 40 (59.7%) | 0.436 |
| **FeNa<1** | 18 (72%) | 23 (50%) | 0.073 |
| **Hemodialysis** | 13 (38.2%) | 15 (22.4%) | 0.093 |
| **Hb (g/dl)** | 11.2 ±2.7 | 11.5 ±2.9 | 0.659 |
| **TC ($10^3$ per $mm^3$)** | **11.8 ±10.2** | **18.0 ±10.2** | **0.005** |
| **Plt (lacs/$mm^{3)}$** | **1.1 ±0.84** | **1.8 ±1.3** | **0.001** |
| **Day-1Urea (mg/dl)** | 76 ±43 | 80 ±44 | 0.641 |
| **Day-1Creat** | 2.28 ±1.32 | 2.32 ±1.35 | 0.884 |
| **Protein (g/dl)** | **5.6 ±1.5** | **6.1 ±1.1** | **0.020** |
| **Albumin (g/dl)** | 2.7 ± 0.95 | 2.9± 0.8 | 0.100 |
| **pH** | **7.22 ± 0.14** | **7.32 ± 0.13** | **0.001** |
| **Lactate(mmol/L)** | **5.9 ± 4.9** | **3.4 ± 3.1** | **0.011** |
| **Day 1 SOFA score** | **12.2 ±3.9** | **9.9 ±4.4** | **0.013** |
| **Day 2 SOFA score** | **13.2 ±3.3** | **9.2 ±4.9** | **<0.001** |
| **Day 3 SOFA score** | **13.8 ±3.9** | **8.3 ±5.2** | **<0.001** |
| **Day 4 SOFA score** | **15 ±4** | **6.9 ±4.3** | **<0.001** |
| **Day 5 SOFA score** | **14.7 ±4.6** | **6.1 ±4** | **<0.001** |

| | | | |
|---|---|---|---|
| **UNGAL ng/ml** | **6544±5107** (N=22) | **2539 ± 3687** (N=41) | **0.003** |

**Table 16 Univariate analysis of Mortality outcome**

Presence of Chronic Liver Disease was found to be significantly associated with mortality (P=0.028) .38.2% patients in the expired cohort as compared to 22.4% in the survivors were initiated on hemodialysis though the difference did not attain statistical significance (p=0.093). Mean lactate and pH in the patients who expired were 5.9 ± 4.9 mmol/l and 7.22 ± 0.14 respectively and were significantly worse than the patients who survived. Total protein and platelet counts were also significantly lower in the the patients who had mortality.

Further SOFA scores at all days had significant association with mortality (p<0.001).Urinary NGAL was also found to be significantly associated with mortality .The mean levels were 6544± 5107 ng/ml in patients who expired while the levels were 2539 ±3687 ng/ml in survivors (P=0.003).On further analysis the area under the ROC curve for NGAL to predict mortality was found to be 0.81.

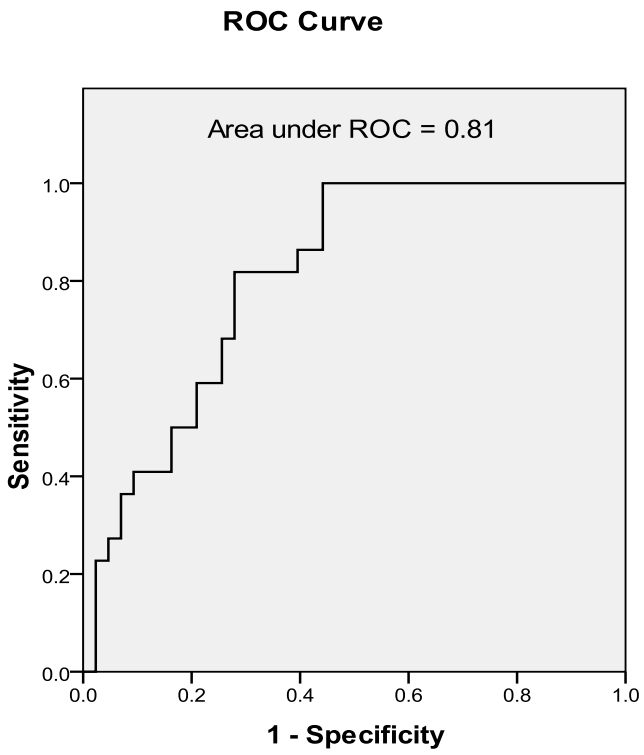



**Fig.17 ROC curve for NGAL for mortality prediction**

Thirteen of the expired cohort (38.2%) as compared to 15 of survivors (22.4%) required Renal replacement therapy. The difference was not significant between the two with a P value of 0.093.Thus Hemodialysis requirement was not associated with mortality in univariate analysis.

**Multivariate analysis for Mortality predictors:** Using stepwise backward logistic regression a model for prediction of mortality was generated with a predictive power of 77.6%. In the model SOFA score at day 2 was most powerful independent predictor of mortality (P = 0.006), followed by pH at presentation (p=0.015) and SOFA score at day 1 (P=0.026 ) .Although urinary NGAL was significantly associated with mortality in

univariate analysis ,in multivariate model it had a borderline significance in prediction of mortality (P= 0.078).

| Variable | B | SE | Wald | P | Exp (B) |
|---|---|---|---|---|---|
| **HD(1)** | -1.105E+00 | 0.884 | 1.563 | 0.211 | 0.331 |
| **CLD(1)** | 22.436 | 18269.321 | 0.000 | 0.999 | 5.545E+09 |
| **PH** | 8.342 | 3.428 | 5.923 | **0.015** | 4196.777 |
| **Protein** | -1.250E-01 | 0.288 | 0.188 | 0.664 | 0.882 |
| **UNGAL** | -1.358E-04 | 0.000 | 3.104 | 0.078 | 1.000 |
| **sofa2** | -4.383E-01 | 0.161 | 7.414 | **0.006** | 0.645 |
| **sofa1** | 0.406 | 0.182 | 4.981 | **0.026** | 1.501 |

**Table 17 Predictors of mortality in multivariate analysis**

## Discussion

Acute kidney injury in the ICU is a significant contributor to morbidity and mortality. It is known to increase the length of hospital stay as well as predisposes to development of Chronic Kidney disease. Studies of biomarkers in AKI in ICU have revealed their capacity to detect and predict outcome at different stages of AKI. We planned the study to investigate the clinical profile and outcomes of incident and prevalent AKI patients in Medical ICU and study urinary NGAL as predictor of its outcome.

**Study Population characteristics:** The study population was derived from the Medical Intensive care unit of our hospital which admits a host of sick patients belonging to different medical specialities like Gastroenterology, Neurology, internal medicine, Nephrology etc. Thus the results of this study are applicable to any general medical ICU population .There was a male predominance in the study cohort with a significant number of elderly patients .AKIN stage at inclusion was AKIN 1-37%,AKIN2- 30% and AKIN 3 -33% patients .

**Causes of AKI:** In our study Sepsis was the leading cause of Acute Kidney Injury occurring in 58.3% of patients. This is well in coherence with the fact that Sepsis and ARDS are the two important clinical syndromes occurring in the ICU. Our patients with Septic AKI had lesser mean urine out put than other AKI patients (P=0.015).Also they had significantly lower serum albumin levels signifying the catabolic state. Mortality and

length of hospital stay was also greater in patients with septic AKI patients though statistical significance was not reached.

The Beginning and end supportive therapy (BEST ) kidney investigators had evaluated a diverse population of critically ill patients in 54 hospitals of 23 nations and inferred that sepsis is the leading cause of AKI in this group estimated to be responsible for 47.5% of burden. The septic AKI patients were also found to have greater amount of oliguria (67% vs 57%,P, 0.001) ,higher in hospital mortality (70.2% vs 51.8% ,P<0.001) and increased duration of hospital stay (37d vs 21d,P,0.001) [192].

Other important causes were drugs , scrub typhus ,pigment nephropathy and Cardiorenal syndrome. While Scrub typhus is not a very well known cause of AKI it is quite common in South India and is associated with renal dysfunction .In fact a study by Basu et al evaluated the various tropical acute febrile illnesses causing AKI.Overall 53% (80) of AKI was attributed to scrub typhus, other causes were malaria , Leptospirois and Dengue [193].

There were significant number of post cardiac arrest AKI patients in the cohort who required prolonged inotropic support post resuscitation. Chua et al has reported that among the survivors of cardiac arrest the need for inotropes beyond 24 hours of return of spontaneous circulation predisposes to development of AKI (51.7% versus 6.4% )[194].

**Predictors of Renal outcome :** Important factors associated with renal outcome in multivariate analysis were Diabetes mellitus ,SOFA score at day 2 and a normal baseline

renal function .Urinary NGAL was significant in predicting renal outcome in univariate analysis with an area under ROC of 0.71. Of note SOFA scores were found to be significantly high at all days in those who did not recover renal function. Mendonca et al [195]studied the risk factors for development of AKI in ICU and its association with multiple organ failure (MOF) as defined by SOFA score of 3 or more for two or more organ systems other than the kidney. There was a strong association between Multiple organ dysfunction and AKI. Of 348 AKI patients 241 had MOF .Of these 65% of the patients developed AKI at the same time as MOF while 25% developed before AKI and 10% after AKI. Thus it can be deduced from above discussion that coexistence of other organ dysfunction can further prevent renal recovery .This explains the significantly high SOFA scores in patients who did not recover renal function by day 7.The cause and effect relationship of MOF and AKI needs to be further looked into .

**Mortality:** Overall mortality at day 7 was 34% in our study cohort. In various ICU studies the mortality rate in AKI patients has been variedly reported from 10.9% [24] to 36.3% [20] to 47.5% [21].Most of these studies were done in mixed medical-surgical ICU's. The predictors of mortality in our study in multivariate logistic regression analysis were SOFA score at day 1 and 2 , pH at day of inclusion and a modest contribution from urinary NGAL ( P = 0.078). NGAL was found to have an area under ROC curve for mortality of 0.81. SOFA score is a validated method for outcome prediction in critically ill patients .Mortality rates as predicted by SOFA vary from as low as 3.2% in patients without failure of any organ to as high as 91.3% in patients who have failure of all six

organs [196]. Although RRT requirement is known to be independent risk factor for mortality in ICU [24,26] ,in our study it was not significantly associated with mortality although the P value was 0.093.This may be due to a smaller sample size.

**Urinary NGAL** : The mean urinary NGAL levels in our study were 1270.2±1659.5 ng/ml in AKIN stage 1 ,4865.9±4992.3 ng/ml in AKIN stage 2 and 6135±4586.1ng/ml in AKIN stage 3 patients at the time of recruitment in the study. Our levels of urinary NGAL were higher than those reported by de Geus et al [176] in his study of AKI patients in ICU .He found median urinary NGAL levels in RIFLE 'R' to be 323 ng/ml, those in RIFLE 'I' to be 523ng/ml and in RIFLE 'F' to be 2013 ng/ml. The difference in observation can be attributed to significantly higher septic patients in our study cohort .The study by de Geus had only 17% of patients with septic AKI and consisted of significant number of post surgery and Trauma related AKI. Our trends of urinary NGAL seem to follow similar pattern as above study and were significantly higher in AKIN2 and AKIN 3 stages at inclusion than AKIN 1 patients.

Urinary NGAL was found to be significant predictor of outcomes including renal recovery at day 3 and day 7 in univariate analysis. In fact NGAL predicted renal outcome and requirement of RRT with an area under the ROC of 0.71.Supporting this observation is study by Singer et al [178] where urinary NGAL predicted a composite outcome as defined by upgradation in RIFLE class, dialysis initiation and mortality with area under ROC of 0.71.In comparison, in our study NGAL was a better predictor of mortality with an area under ROC of 0.81.However in multivariate analysis the predictive power of

NGAL was subdued by concomitant addition of SOFA scores .Urinary NGAL predicted RRT initiation in the first week of ICU admission with an AUC of 0.89 ±0.04 in the study by de Geus [176].However it was only a modest predictor of mortality in this study (AUC 0.64 ±0.06).

**Limitations of Study:** Our study had significant limitations .First there was significant presence of sepsis and severe sepsis in our AKI patients. As already discussed the source of urinary NGAL can be injured tubules or it can be secondary to release from activated neutrophils in inflammatory states like sepsis [156,160].Thus the NGAL in urine in such cases may actually come from extra renal sources .This condition seems to be true for our study where mean Urinary NGAL levels were higher than those reported by other studies.

Also Urinary NGAL values were higher in patients with septic vs non-septic AKI (p=0.063).Hence there is possibility that high Urinary NGAL as found in our study maybe due to concomitant sepsis besides AKI. Second the sample size was small hence many observations like association of RRT and mortality might not have reached statistical significance.

# CONCLUSIONS

1. Sepsis is the most common cause of AKI followed by drug induced AKI in medical ICU .Patients with sepsis had a longer hospital stay and greater mortality than non septic AKI though statistical significance was not reached.
2. Recovery from AKI at day 3 was 25% while 52% of surviving patients recovered fully by day 7.
3. Urinary NGAL levels significantly predicted renal outcome, requirement of RRT and mortality in 7 days of follow up .
4. Diabetes, SOFA score at day 2 and normal baseline renal function significantly predicted renal recovery at day 7.
5. Of the study cohort 28.2% patients required renal replacement therapy within 7 days of diagnosis of AKI.
6. Overall mortality at day 7 was 34%. SOFA SCORE at admission and subsequent days ($p<0.01$) but not HD requirement were significantly associated with mortality. In multivariate analysis SOFA score at day 1 and 2, pH at day 1 and Urinary NGAL significantly predicted mortality.

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| CASECONT | HNO | Name | preicustay | DOA | icuastay2 | DOMICU | dateouticu | ICUANDPO | DODISOREX | DODOREXP |
|---|---|---|---|---|---|---|---|---|---|---|
| CASE | 914939F | AIYSHABEE | 0 | 31-Jul-14 | 12 | 31-Jul-14 | 11-Aug-14 | 67 | 05.10.14 | 5-Oct-14 |
| CASE | 869537F | ALOK MAH | 27 | 23-May-14 | 3 | 19-Jun-14 | 21-Jun-14 | 3 | 21.6.14 | 21-Jun-14 |
| CASE | 929080F | AMBIGESW | 0 | 5-Nov-14 | 8 | 5-Nov-14 | 12-Nov-14 | 10 | 14.11.14 | 14-Nov-14 |
| CASE | 912800F | AMUDHA | 1 | 12-Jul-14 | 3 | 13-Jul-14 | 15-Jul-14 | 20 | 1.8.14 | 1-Aug-14 |
| CASE | 912701F | AMUTHAV/ | 0 | 11-Jul-14 | 5 | 11-Jul-14 | 15-Jul-14 | 14 | 24.7.14 | 24-Jul-14 |
| CASE | 912171F | ANANDAN( | 0 | 1-Jul-14 | 3 | 1-Jul-14 | 3-Jul-14 | 7 | 7.7.14 | 7-Jul-14 |
| CASE | 917416F | ANNAMAL | 0 | 21-Aug-14 | 8 | 21-Aug-14 | 28-Aug-14 | 20 | 09.09.14 | 9-Sep-14 |
| CASE | 866982F | ASHA BAGF | 18 | 20-Jun-14 | 56 | 8-Jul-14 | 1-Sep-14 | 70 | 15.9.14 | 15-Sep-14 |
| CASE | 191427D | ASKAR ALI | 0 | 28-Nov-14 | 4 | 28-Nov-14 | 1-Dec-14 | 5 | 2.12.14 | 2-Dec-14 |
| CASE | 922231F | BABU M | 0 | 16-Sep-14 | 6 | 16-Sep-14 | 21-Sep-14 | 8 | 23.9.14 | 23-Sep-14 |
| CASE | 928624F | BASKAR | 0 | 31-Oct-14 | 4 | 31-Oct-14 | 3-Nov-14 | 4 | 3.11.14 | 3-Nov-14 |
| CASE | 912146F | BASKAR | 0 | 30-Jun-14 | 16 | 30-Jun-14 | 15-Jul-14 | 22 | 21.7.14 | 21-Jul-14 |
| CASE | 929152D | BHASKAR G | 0 | 18-Oct-14 | 6 | 18-Oct-14 | 23-Oct-14 | 25 | 11.11.14 | 11-Nov-14 |
| CASE | 007994G | BIMLA DEV | 3 | 18-Jul-14 | 6 | 21-Jul-14 | 26-Jul-14 | 6 | 26.7.14 | 26-Jul-14 |
| CASE | 928235F | CECIMTHRI | 0 | 27-Oct-14 | 7 | 27-Oct-14 | 2-Nov-14 | 7 | 2.11.14 | 2-Nov-14 |
| CASE | 931929F | CHINNA SA | 0 | 28-Nov-14 | 9 | 28-Nov-14 | 6-Dec-14 | 9 | 6.12.14 | 6-Dec-14 |
| CASE | 185450B | CHINNAMM | 1 | 6-Sep-14 | 12 | 7-Sep-14 | 18-Sep-14 | 21 | 27.9.14 | 27-Sep-14 |
| CASE | 912108F | CHINNASAI | 6 | 30-Jun-14 | 3 | 6-Jul-14 | 8-Jul-14 | 3 | 8.7.14 | 8-Jul-14 |
| CASE | 479294F | DASHAKUM | 0 | 7-Sep-14 | 28 | 7-Sep-14 | 4-Oct-14 | 28 | 4.10.14 | 4-Oct-14 |
| CASE | 725485F | DHARMALI | 20 | 16-Jun-14 | 7 | 6-Jul-14 | 12-Jul-14 | 7 | 12.7.14 | 12-Jul-14 |
| CASE | 907409F | DHIVYA | 1 | 13-Jun-14 | 5 | 14-Jun-14 | 18-Jun-14 | 5 | 18.6.14 | 18-Jun-14 |
| CASE | 082329G | DILIP PAL | 1 | 27-Nov-14 | 2 | 28-Nov-14 | 29-Nov-14 | 2 | 29.10.14 | 29-Oct-14 |
| CASE | 173066 | DORAISWA | 0 | 4-Oct-14 | 5 | 4-Oct-14 | 8-Oct-14 | 21 | 23.1014 | |
| CASE | 434215F | ELUMALAI | 0 | 23-Nov-14 | 7 | 23-Nov-14 | 29-Nov-14 | 9 | 1.12.14 | 1-Dec-14 |
| CASE | 086392G | GABRIELLA | 10 | 2-Nov-14 | 9 | 12-Nov-14 | 20-Nov-14 | 9 | 20.11.14 | 20-Nov-14 |
| CASE | 040852G | GOPINATH | 1 | 6-Sep-14 | 15 | 7-Sep-14 | 21-Sep-14 | 28 | 04.10.14 | 4-Oct-14 |
| CASE | 912129F | GORLARAM | 0 | 30-Jun-14 | 3 | 30-Jun-14 | 2-Jul-14 | 25 | 24.7.14 | 24-Jul-14 |
| CASE | 9109444F | GOVINDAR | 0 | 28-Jun-14 | 4 | 28-Jun-14 | 1-Jul-14 | 4 | 1.7.14 | 1-Jul-14 |
| CASE | 917841F | GOVINDAR | 0 | 28-Aug-14 | 18 | 28-Aug-14 | 14-Sep-14 | 18 | 14.09.14 | 14-Sep-14 |
| CASE | 926216F | GOVINDRA | 0 | 15-Oct-14 | 2 | 15-Oct-14 | 16-Oct-14 | 2 | 16.10.14 | 16-Oct-14 |
| CASE | 923275F | GUNASEKA | 0 | 2-Oct-14 | 2 | 2-Oct-14 | 3-Oct-14 | 13 | 14.10.14 | 14-Oct-14 |
| CASE | 922494F | GURRALA V | 1 | 21-Sep-14 | 6 | 22-Sep-14 | 27-Sep-14 | 6 | 27.9.14 | 27-Sep-14 |

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|---|---|---|---|---|---|---|---|---|---|---|
| CASE | 922708F | HEMANT R | 0 | 24-Sep-14 | 2 | 24-Sep-14 | 25-Sep-14 | 2 | 25.9.14 | 25-Sep-14 |
| CASE | 897432F | JANAMJAY | 8 | 4-Jul-14 | 4 | 12-Jul-14 | 15-Jul-14 | 30 | 10.8.14 | 10-Aug-14 |
| CASE | 922702F | JOTHI M | 0 | 23-Sep-14 | 4 | 23-Sep-14 | 26-Sep-14 | 4 | 26.09.14 | 26-Sep-14 |
| CASE | 914547F | JOYCE RATI | 0 | 24-Jul-14 | 7 | 24-Jul-14 | 30-Jul-14 | 8 | 31.7.14 | 31-Jul-14 |
| CASE | 436708D | JYOTIRMOY | 4 | 13-Jun-14 | 2 | 17-Jun-14 | 18-Jun-14 | 2 | 18.6.14 | 18-Jun-14 |
| CASE | 910746F | KALAISELVI | 0 | 25-Jun-14 | 3 | 25-Jun-14 | 27-Jun-14 | 18 | 12.7.14 | 12-Jul-14 |
| CASE | 914852F | KALAIVANI | 0 | 28-Jul-14 | 6 | 28-Jul-14 | 2-Aug-14 | 7 | 3.8.14 | 3-Aug-14 |
| CASE | 912186F | KULANDAIV | 0 | 30-Jun-14 | 18 | 30-Jun-14 | 17-Jul-14 | 57 | 25.8.14 | 25-Aug-14 |
| CASE | 931066F | KUPPAN S | 0 | 16-Nov-14 | 6 | 16-Nov-14 | 21-Nov-14 | 11 | 26.11.14 | 26-Nov-14 |
| CASE | 630509D | MALLIGA | 0 | 9-Oct-14 | 7 | 9-Oct-14 | 15-Oct-14 | 10 | 18.10.14 | 18-Oct-14 |
| CASE | 060367G | MANAS SA | 2 | 1-Oct-14 | 4 | 3-Oct-14 | 6-Oct-14 | 4 | 6.10.14 | 6-Oct-14 |
| CASE | 912219F | MANEKAM | 0 | 2-Jul-14 | 10 | 2-Jul-14 | 11-Jul-14 | 11 | 12.7.14 | 12-Jul-14 |
| CASE | 059438G | MITHUN KU | 0 | 28-Sep-14 | 5 | 28-Sep-14 | 2-Oct-14 | 5 | 2.10.14 | 2-Oct-14 |
| CASE | 909233F | MOGILAMI | 0 | 13-Jul-14 | 9 | 13-Jul-14 | 21-Jul-14 | 169 | 28.12.14 | 28-Dec-14 |
| CASE | 928712F | MOHAN C | 0 | 1-Nov-14 | 7 | 1-Nov-14 | 7-Nov-14 | 7 | 7.11.14 | 7-Nov-14 |
| CASE | 923155F | MOHAN V | 0 | 30-Sep-14 | 6 | 30-Sep-14 | 5-Oct-14 | 21 | 20.10.14 | 20-Oct-14 |
| CASE | 887628F | MOHD SHA | 2 | 4-Jul-14 | 7 | 6-Jul-14 | 12-Jul-14 | 7 | 12.7.14 | 12-Jul-14 |
| CASE | 731746C | MUNIRATH | 0 | 2-Aug-14 | 5 | 2-Aug-14 | 6-Aug-14 | 14 | 15.8.14 | 15-Aug-14 |
| CASE | 915222F | MURALI | 0 | 3-Aug-14 | 7 | 3-Aug-14 | 9-Aug-14 | 7 | 9.8.14 | 9-Aug-14 |
| CASE | 910446F | MURUGAN | 0 | 21-Jun-14 | 5 | 21-Jun-14 | 25-Jun-14 | 8 | 28.6.14 | 28-Jun-14 |
| CASE | 931495F | NEETHI DEV | 0 | 23-Nov-14 | 3 | 23-Nov-14 | 25-Nov-14 | 15 | 7.12.14 | 7-Dec-14 |
| CASE | 910535F | PADMAVAT | 0 | 22-Jun-14 | 11 | 22-Jun-14 | 2-Jul-14 | 11 | 2.7.14 | 2-Jul-14 |
| CASE | 926768F | PANDURAN | 0 | 22-Oct-14 | 2 | 22-Oct-14 | 23-Oct-14 | 10 | 31.10.14 | 31-Oct-14 |
| CASE | 208884C | PARVATHIA | 0 | 27-Jun-14 | 3 | 27-Jun-14 | 29-Jun-14 | 8 | 4.7.14 | 4-Jul-14 |
| CASE | 922421F | PASUPATH | 0 | 19-Sep-14 | 6 | 19-Sep-14 | 24-Sep-14 | 15 | 3.10.14 | 3-Oct-14 |
| CASE | 909356F | PENTAKOT/ | 50 | 10-Jun-14 | 7 | 30-Jul-14 | 5-Aug-14 | 7 | 05.08.14 | 5-Aug-14 |
| CASE | 376245D | PHELU DEV | 1 | 31-Jul-14 | 7 | 1-Aug-14 | 7-Aug-14 | 19 | 19.8.14 | 19-Aug-14 |
| CASE | 881062F | PRABHUNA | 0 | 3-Jul-14 | 6 | 3-Jul-14 | 8-Jul-14 | 6 | 8.07.14 | 8-Jul-14 |
| CASE | 781265C | PURUSHOT | 0 | 12-Jul-14 | 1 | 12-Jul-14 | 12-Jul-14 | 1 | 12.7.14 | 12-Jul-14 |
| CASE | 929279F | PUSHKARA | 0 | 8-Nov-14 | 7 | 8-Nov-14 | 14-Nov-14 | 8 | 15.11.14 | 15-Nov-14 |
| CASE | 915048F | RAGHUL J | 0 | 30-Jul-14 | 2 | 30-Jul-14 | 31-Jul-14 | 8 | 6.8.14 | 6-Aug-14 |
| CASE | 291350F | RAJESWAR | 2 | 1-Aug-14 | 2 | 3-Aug-14 | 4-Aug-14 | 11 | 13.8.14 | 13-Aug-14 |
| CASE | 914068F | RAMMURT | 0 | 17-Jul-14 | 15 | 17-Jul-14 | 31-Jul-14 | 41 | 26.8.14 | 26-Aug-14 |

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|---|---|---|---|---|---|---|---|---|---|---|
| CASE | 914097F | RAVINDRA | 0 | 17-Jul-14 | 6 | 17-Jul-14 | 22-Jul-14 | 6 | 22.7.14 | 22-Jul-14 |
| CASE | 018575G | RIYAS KP | 0 | 31-Jul-14 | 7 | 31-Jul-14 | 6-Aug-14 | 15 | 14.08.14 | 14-Aug-14 |
| CASE | 883006F | SABINA | 0 | 15-Jun-14 | 6 | 15-Jun-14 | 20-Jun-14 | 7 | 21.6.14 | 21-Jun-14 |
| CASE | 912951F | SADASIVAN | 0 | 3-Sep-14 | 10 | 3-Sep-14 | 12-Sep-14 | 10 | 12.09.14 | 12-Sep-14 |
| CASE | 929723F | SAKTHI SAF | 0 | 13-Nov-14 | 5 | 13-Nov-14 | 17-Nov-14 | 15 | 27.11.14 | 27-Nov-14 |
| CASE | 923823F | SANTI ROY | 7 | 6-Nov-14 | 5 | 13-Nov-14 | 17-Nov-14 | 5 | 17.11.14 | 17-Nov-14 |
| CASE | 926835F | SARASWAT | 0 | 23-Oct-14 | 12 | 23-Oct-14 | 3-Nov-14 | 17 | 8.11.14 | 8-Nov-14 |
| CASE | 922262F | SARAVANA | 4 | 17-Sep-14 | 5 | 21-Sep-14 | 25-Sep-14 | 8 | 28.9.14 | 28-Sep-14 |
| CASE | 931433F | SATHICK BA | 0 | 29-Nov-14 | 4 | 29-Nov-14 | 2-Dec-14 | 4 | 2.12.14 | 2-Dec-14 |
| CASE | 923686F | SAVITHRIAI | 0 | 7-Oct-14 | 6 | 7-Oct-14 | 12-Oct-14 | 9 | 15.10.14 | 15-Oct-14 |
| CASE | 496404F | SEKAR E | 0 | 19-Jul-14 | 3 | 19-Jul-14 | 21-Jul-14 | 4 | 22.7.14 | 22-Jul-14 |
| CASE | 008830G | SHAKUNTA | 6 | 18-Jul-14 | 7 | 24-Jul-14 | 30-Jul-14 | 14 | 06.08.14 | 6-Aug-14 |
| CASE | 914177F | SIVAKUMA | 0 | 19-Jul-14 | 8 | 19-Jul-14 | 26-Jul-14 | 9 | 27.7.14 | 27-Jul-14 |
| CASE | 914594F | SIVALINGAI | 0 | 25-Jul-14 | 7 | 25-Jul-14 | 31-Jul-14 | 11 | 4.8.14 | 4-Aug-14 |
| CASE | 865829F | SOBHANRA | 18 | 19-May-14 | 13 | 6-Jun-14 | 18-Jun-14 | 28 | 3.7.14 | 3-Jul-14 |
| CASE | 883425F | SONU TOPI | 0 | 13-Jun-14 | 9 | 13-Jun-14 | 21-Jun-14 | 9 | 21.6.14 | 21-Jun-14 |
| CASE | 923098F | SUBBA RED | 0 | 29-Sep-14 | 11 | 29-Sep-14 | 9-Oct-14 | 12 | 10.10.14 | 10-Oct-14 |
| CASE | 932022F | SUBBANA M | 0 | 30-Nov-14 | 10 | 30-Nov-14 | 9-Dec-14 | 17 | 16.12.14 | 16-Dec-14 |
| CASE | 662171F | SUDHA S | 0 | 17-Nov-14 | 6 | 17-Nov-14 | 22-Nov-14 | 6 | 22.11.14 | 22-Nov-14 |
| CASE | 910223F | SUGARANI | 0 | 17-Jun-14 | 3 | 17-Jun-14 | 19-Jun-14 | 7 | 23.6.14 | 23-Jun-14 |
| CASE | 201236F | SUGUNA D | 1 | 24-Jul-14 | 7 | 25-Jul-14 | 31-Jul-14 | 18 | 11.08.14 | 11-Aug-14 |
| CASE | 455209F | SUJI | 0 | 4-Oct-14 | 4 | 4-Oct-14 | 7-Oct-14 | 4 | 7.10.14 | 7-Oct-14 |
| CASE | 929995F | SURENDRA | 0 | 15-Nov-14 | 19 | 15-Nov-14 | 3-Dec-14 | 33 | 17.12.14 | 17-Dec-14 |
| CASE | 912024F | SURESH | 0 | 29-Jun-14 | 9 | 29-Jun-14 | 7-Jul-14 | 9 | 7.7.14 | 7-Jul-14 |
| CASE | 912057F | SURESHKUI | 0 | 1-Jul-14 | 10 | 1-Jul-14 | 10-Jul-14 | 10 | 10.7.14 | 10-Jul-14 |
| CASE | 922392F | SYEDSHA H | 0 | 19-Sep-14 | 12 | 19-Sep-14 | 30-Sep-14 | 16 | 4.10.14 | 4-Oct-14 |
| CASE | 776472B | TAMILARAS | 0 | 19-Aug-14 | 2 | 19-Aug-14 | 20-Aug-14 | 14 | 1.09.14 | 1-Sep-14 |
| CASE | 929320F | TAPAS GAII | 1 | 8-Nov-14 | 3 | 9-Nov-14 | 11-Nov-14 | 6 | 14.11.14 | 14-Nov-14 |
| CASE | 850718F | UMAKANT | 0 | 30-Oct-14 | 4 | 30-Oct-14 | 2-Nov-14 | 4 | 2.11.14 | 2-Nov-14 |
| CASE | 928330F | UMESH K Y | 0 | 28-Oct-14 | 5 | 28-Oct-14 | 1-Nov-14 | 5 | 1.11.14 | 1-Nov-14 |
| CASE | 917357F | VEERASWA | 0 | 20-Aug-14 | 2 | 20-Aug-14 | 21-Aug-14 | 2 | 21.8.14 | 21-Aug-14 |
| CASE | 922027F | VENKATESA | 0 | 14-Sep-14 | 12 | 14-Sep-14 | 25-Sep-14 | 24 | 7.10.14 | 7-Oct-14 |
| CASE | 910168F | VENKATGU | 5 | 16-Jun-14 | 6 | 21-Jun-14 | 26-Jun-14 | 6 | 26.6.14 | 26-Jun-14 |

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|---|---|---|---|---|---|---|---|---|---|---|
| CASE | 910652F | VENKATREI | 0 | 24-Jun-14 | 2 | 24-Jun-14 | 25-Jun-14 | 2 | 25.6.14 | 25-Jun-14 |
| CASE | 915713F | VIJAYLAKSH | 2 | 10-Aug-14 | 2 | 12-Aug-14 | 13-Aug-14 | 3 | 14.8.14 | 14-Aug-14 |
| CASE | 669419D | VINAYGAM | 2 | 2-Jul-14 | 5 | 4-Jul-14 | 8-Jul-14 | 5 | 8.7.14 | 8-Jul-14 |
| CASE | 929361F | VISWANAT | 0 | 9-Nov-14 | 2 | 9-Nov-14 | 10-Nov-14 | 2 | 10.11.14 | 10-Nov-14 |
| CASE | 248202D | YESODHA | 0 | 1-Nov-14 | 4 | 1-Nov-14 | 4-Nov-14 | 5 | 5.11.14 | 5-Nov-14 |

| UNGAL | age | AGEGROUP | sex | basecreat | CKDSTG | DM | HTN | CAD | COPD | CVA | CLD | MALIGNAN | HYPOTHY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 47 | 41-50 | F | 0.8 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 8832.84 | 44 | 41-50 | M | 0.89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| | 67 | 61-70 | F | | | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 5040.44 | 47 | 41-50 | F | 0.68 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2113.52 | 50 | 41-50 | F | 0.59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 329.24 | 33 | 31-40 | M | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 3848.29 | 45 | 41-50 | F | 0.67 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 52 | 51-60 | F | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 2347.66 | 64 | 61-70 | M | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 74.71 | 29 | 21-30 | M | 0.58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3528.38 | 43 | 41-50 | M | 0.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 31 | 31-40 | M | 0.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 158.55 | 62 | 61-70 | M | 0.87 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| | 62 | 61-70 | F | 0.68 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 2465.28 | 19 | 10-20 | F | 0.92 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 791.27 | 54 | 51-60 | M | 1.25 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 979.41 | 70 | 61-70 | F | 0.56 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 5834.31 | 69 | 61-70 | M | 3.13 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8493.24 | 50 | 41-50 | M | 0.79 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 47 | 41-50 | M | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20000 | 20 | 10-20 | F | 0.59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1136.53 | 59 | 51-60 | M | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2327.39 | 80 | >70 | M | 1.67 | 3 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| 6503 | 68 | 61-70 | M | 0.81 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| | 61 | 61-70 | F | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 50 | 41-50 | M | 1.13 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 38 | 31-40 | M | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 62 | 61-70 | M | 0.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 199.6 | 79 | >70 | M | 0.64 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 20000 | 72 | >70 | M | 2.32 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1565.65 | 40 | 31-40 | M | 0.61 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4677.52 | 40 | 31-40 | M | 0.93 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1144.5 | 22 | 21-30 | M | 0.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 268.37 | 44 | 41-50 | M | 0.62 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7518.44 | 45 | 41-50 | F | 1 | 2 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 95.37 | 50 | 41-50 | F | 0.53 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 |
| 1233.72 | 51 | 51-60 | M | 1.18 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 |
| 218.22 | 25 | 21-30 | F | 0.97 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 792.34 | 38 | 31-40 | F | 0.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 67 | 61-70 | M | 0.49 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 47 | 41-50 | M | 0.75 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 |
| | 62 | 61-70 | F | 0.64 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17237.52 | 44 | 41-50 | M | 0.72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 7819.3 | 75 | >70 | M | 1.2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10947.74 | 19 | 10-20 | M | 0.65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 42 | 41-50 | F | 0.63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 15032.78 | 47 | 41-50 | M | 1.92 | | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| | 40 | 31-40 | M | 0.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 47 | 41-50 | M | 0.69 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| | 61 | 61-70 | M | 0.99 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5200.13 | 40 | 31-40 | M | 1.1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2176.65 | 33 | 31-40 | M | 0.77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6594.18 | 30 | 21-30 | M | 0.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3730.25 | 62 | 61-70 | F | 0.67 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 578.13 | 62 | 61-70 | M | 2.92 | 4 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 240.77 | 58 | 51-60 | F | 0.81 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18132.24 | 22 | 21-30 | M | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 19 | 10-20 | M | 0.51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| | 48 | 41-50 | F | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1327.36 | 61 | 61-70 | M | 0.58 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20000 | 71 | >70 | M | | 4 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| | 45 | 41-50 | F | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 99.88 | 25 | 21-30 | M | 0.82 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2186.8 | 68 | 61-70 | F | 0.97 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10043.04 | 55 | 51-60 | M | 0.72 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 35 | 31-40 | M | 1.4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 43 | 41-50 | M | 0.6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| | 29 | 21-30 | F | 0.46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1325.26 | 65 | 61-70 | M | 0.65 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 24 | 21-30 | M | 0.55 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 60 | 51-60 | F | 0.78 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 62 | 61-70 | F | 1.01 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 26 | 21-30 | M | 0.76 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3911.06 | 40 | 31-40 | M | 1.08 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 368.88 | 70 | 61-70 | F | 1.4 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 365 | 52 | 51-60 | M | 0.67 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 70 | 61-70 | F | 0.65 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 76.78 | 30 | 21-30 | M | 0.58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2844.68 | 55 | 51-60 | M | 0.64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1035.09 | 57 | 51-60 | M | 0.35 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 153.29 | 19 | 10-20 | M | 0.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 437.14 | 65 | 61-70 | M | 0.52 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8924.46 | 70 | 61-70 | M | 0.83 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2795.04 | 39 | 31-40 | F | 0.74 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| | 23 | 21-30 | F | 0.58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 58 | 51-60 | F | 0.7 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16949.64 | 26 | 21-30 | F | 0.66 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 808.85 | 61 | 61-70 | M | 0.73 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| 5150.69 | 25 | 21-30 | M | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 65.05 | 36 | 31-40 | M | 0.68 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1308.58 | 66 | 61-70 | M | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 82.02 | 33 | 31-40 | F | 0.44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 72.63 | 32 | 31-40 | M | 0.43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| | 46 | 41-50 | M | 0.53 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 5480.99 | 45 | 41-50 | M | 1.97 | | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 8799.54 | 65 | 61-70 | M | 2.02 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 55 | 51-60 | M | 0.6 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 7943.78 | 49 | 41-50 | M | 3.42 | 3 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20000 | 59 | 51-60 | M | 1.2 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |
| 9560.46 | 25 | 21-30 | F | 0.75 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2996 | 35 | 31-40 | M | 0.78 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 10421.28 | 80 | >70 | M | | | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 761.45 | 72 | >70 | F | 0.72 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |

| OTHERS | TB | VAR00003 | hb | TC | poly | lymph | mono | eosin | BLASTS | plt | prot | Alb | sgot |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0 | 2 | 7.4 | 12900 | 78 | 18 | 4 | 0 | 0 | 225000 | 6.8 | 3.1 | 51 |
| 0 | 0 | 0 | 8.3 | 100 | | | | | | 18000 | 6.1 | 2.9 | 19 |
| | 0 | | 9.5 | 28700 | 90 | 6 | 4 | 0 | 0 | 410000 | 7 | 3.9 | 81 |
| LEFT LEG FI | 0 | 0 | 12.6 | 8400 | 89 | 9 | 2 | 0 | 0 | 287000 | 5.4 | 2.7 | 77 |
| SJOGREN'S | 0 | 0 | 11.3 | 36900 | 90 | 4 | 6 | 0 | 0 | 400000 | 7.2 | 2.9 | 30 |
| 0 | 0 | 0 | 13.2 | 12610 | 86 | 8 | 6 | 0 | 0 | 297000 | 7 | 4.4 | 34 |
| 0.0 | 0 | 0 | 13 | 11900 | 70 | 25 | 5 | 0 | 0 | 45000 | 5.9 | 2.4 | 122 |
| DERMATOI | 0 | 0 | 7.3 | 13260 | 85 | 8 | 7 | 0 | 0 | 90000 | 5.4 | 2 | 71 |
| 0.0 | 0 | 2 | 11.2 | 16200 | 91 | 4 | 5 | 0 | 0 | 228000 | 9.5 | 3 | 24 |
| 0.0 | 0 | 0 | 17.7 | 37660 | 81 | 13 | 4 | 0 | 0 | 404000 | 7.1 | 4.2 | 31 |
| 0.0 | 0 | 1 | 15.9 | 8920 | 80 | 17 | 2 | 0 | 0 | 60000 | 5.7 | 2.6 | 295 |
| | 0 | 0 | 15.5 | 16390 | 84 | 6 | 10 | 0 | 0 | 190000 | 6.1 | 3.6 | 137 |
| SLE WITH P | 0 | 1 | 13.4 | 8700 | 84 | 4 | 12 | 0 | 0 | 146000 | 8.8 | 2.1 | 80 |
| 0.0 | 0 | 0 | 10.3 | 15700 | 89 | 7 | 4 | 0 | 0 | 130000 | 6.2 | 3 | 27 |
| 0.0 | 0 | 0 | 12.8 | 10500 | 54 | 36 | 9 | 1 | 0 | 70000 | 5.8 | 2.1 | 188 |
| 0.0 | 0 | 2 | 11.2 | 10500 | 92 | 3 | 4 | 1 | 0 | 60000 | 6.3 | 2.4 | 459 |
| 0 | 0 | 0 | 9.8 | 14100 | 73 | 15 | 12 | 0 | 0 | 197000 | 5.8 | 3.2 | 220 |
| 0.0 | 0 | 3 | 7 | 6780 | 46 | 44 | 10 | 0 | 0 | 80000 | 5 | 2.3 | 204 |
| | 0 | 0 | 12.2 | 11000 | 85 | 10 | 4 | 1 | 0 | 75000 | 4.8 | 2 | 1031 |
| 0 | 0 | 0 | 12.3 | 10000 | 98 | 1 | 1 | 0 | 0 | 14000 | 5.6 | 2.6 | 45 |
| | 0 | 0 | 6.5 | 500 | 10 | 90 | 0 | 0 | 0 | 17000 | 1.6 | 4.4 | 37 |
| 0.0 | 0 | 2 | 10 | 10500 | 68 | 24 | 7 | 1 | 0 | 213000 | 7.1 | 3.4 | 73 |
| 0 | 0 | 3 | 9.9 | 16000 | 96 | 2 | 2 | 0 | 0 | 177000 | 6 | 3.1 | 324 |
| SMOKER | 0 | 0 | 11 | 23300 | 77 | 15 | 8 | 0 | 0 | 318000 | 8.2 | 3.3 | 19 |
| TAH 20 YRS | 0 | 0 | 8.6 | 7700 | 81 | 15 | 4 | 0 | 0 | 61000 | 4.7 | 2.5 | 155 |
| 0.0 | 0 | 2 | 12.9 | 6100 | 80 | 9 | 11 | 0 | 0 | 369000 | 6.1 | 2.4 | 18 |
| 0.0 | 0 | 0 | 15.8 | 18050 | 91 | 5 | 4 | 0 | 0 | 262000 | 8.1 | 5 | 1301 |
| 0.0 | 0 | 0 | 13.1 | 17150 | 84 | 12 | 4 | 0 | 0 | 94000 | 6.6 | 3.8 | 70 |
| CHRONICAI | 0 | 0 | 11.8 | 21300 | 83 | 9 | 8 | 0 | 0 | 258000 | 6.1 | 3 | 31 |
| OCC ALCOH | 1 | 3 | 15.8 | 4600 | 85 | 6 | 7 | 2 | 0 | 124000 | 6.3 | 2.4 | 80 |
| 0 | 0 | 0 | 10.4 | 13500 | 86 | 9 | 5 | 0 | 0 | 609000 | 7.7 | 3.2 | 19 |
| 0.0 | 0 | 1 | 10.3 | 8900 | 92 | 6 | 2 | 0 | 0 | 165000 | 4.2 | 1.5 | 1182 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0 | 0 | 11.6 | 12800 | 88 | 11 | 1 | 0 | 0 | 15000 | 4.4 | 2.7 | 1238 |
| RHD | 0 | 0 | 10.4 | 25320 | 78 | 16 | 6 | 0 | 0 | 150000 | 7.9 | 3 | 209 |
| 0 | 0 | 2 | 16 | 19800 | 87 | 9 | 4 | 0 | 0 | 167000 | 8.6 | 3.2 | 182 |
| OSA WITH | 0 | 0 | 11.3 | 24400 | 83 | 11 | 6 | 0 | 0 | 346000 | 7.4 | 4.3 | 59 |
| | 0 | 2 | 9.7 | 4470 | 80 | 15 | 5 | 0 | 0 | 126000 | 3 | 6 | 24 |
| 0.0 | 0 | 0 | 13.8 | 21750 | 84 | 13 | 3 | 0 | 0 | 204000 | 6.4 | 3 | 1328 |
| 0.0 | 0 | 0 | 9.8 | 15700 | 75 | 17 | 8 | 0 | 0 | 164000 | 6.1 | 2.2 | 179 |
| 0.0 | 0 | 0 | 10.7 | 7480 | 71 | 27 | 2 | 0 | 0 | 21000 | 4.3 | 1.2 | 226 |
| CHRONICAI | 0 | 0 | 13.8 | 9600 | 86 | 6 | 8 | 0 | 0 | 70000 | 7.1 | 3.6 | 48 |
| 0 | 1 | 1 | 10.2 | 15200 | 91 | 7 | 2 | 0 | 0 | 155000 | 6.1 | 3.1 | 29 |
| | 1 | 0 | 10.8 | 2000 | 86 | 6 | 8 | 0 | 0 | 56000 | 4.5 | 1.5 | 88 |
| CHRONICAI | 0 | 2 | 12.5 | 8400 | 95 | 1 | 2 | 2 | 0 | 20000 | 4.5 | 1.9 | 109 |
| 0.0 | 0 | 0 | 10.6 | 10100 | 64 | 23 | 9 | 0 | 0 | 29000 | 6.5 | 1.5 | 619 |
| NONE | 0 | 0 | 10.2 | 16400 | 98 | 1 | 1 | 0 | 0 | 197000 | 3.7 | 1.7 | 630 |
| 0.0 | 0 | | 16.2 | 16400 | 81 | 12 | 7 | 1 | 0 | 164000 | 3.4 | 1.8 | 45 |
| 0.0 | 0 | 0 | 12.8 | 22100 | 84 | 7 | 9 | 0 | 0 | 30000 | 5.9 | 3.5 | 171 |
| HCV | 0 | 0 | 8 | 17400 | 91 | 3 | 4 | 0 | 0 | 45000 | 6.2 | 2 | 266 |
| Reformed.a | 0 | 2 | 12 | 13500 | 89 | 5 | 6 | 0 | 0 | 120000 | 7.6 | 3.3 | 51 |
| Occ Alcoho | 0 | 2 | 8.6 | 57500 | 93 | 0 | 0 | 0 | 4 | 138000 | 7.2 | 2.3 | 44 |
| 0.0 | 0 | 0 | 13.3 | 10500 | 84 | 12 | 0 | 0 | 0 | 75000 | 5.3 | 2.3 | 195 |
| 0.0 | 0 | 0 | 17.3 | 27900 | 93 | 2 | 5 | 0 | 0 | 244000 | 6.1 | 3.6 | 66 |
| 0 | 1 | 1 | 8.8 | 21210 | 95 | 2 | 3 | 0 | 0 | 106000 | 5 | 1.9 | 34 |
| PERIPHERA | 0 | 4 | 9.8 | 14900 | 91 | 7 | 1 | 1 | 0 | 206000 | 5.2 | 3 | 19 |
| GITELMAN | 0 | 2 | 10.5 | 10420 | 65 | 25 | 10 | 0 | 0 | 308000 | 7 | 4.1 | 24 |
| 0.0 | 0 | 0 | 11.5 | 37900 | 97 | 1 | 2 | 0 | 0 | 67000 | 4.9 | 3.1 | 138 |
| 0.0 | 0 | 0 | 6.9 | 2500 | 46 | 32 | 8 | 10 | 4 | 162000 | 5.2 | 2.2 | 36 |
| OVERLAP S | 0 | 2 | 7.3 | 13000 | 95 | 2 | 3 | 0 | 0 | 124000 | 5.8 | 2 | |
| MOTOR NE | 1 | 0 | 14.6 | 14120 | 89 | 3 | 8 | 0 | 0 | 119000 | 6.5 | 3.7 | 69 |
| 0 | 0 | 4 | 13.2 | 7990 | 90 | 5 | 5 | 0 | 0 | 28000 | 6.2 | 2 | 40 |
| 0.0 | 0 | | 9.8 | 22300 | 74 | 17 | 9 | 0 | 0 | 28000 | 6.7 | 3.4 | 7346 |
| .00 | 0 | 0 | 14.6 | 7500 | 74 | 19 | 6 | 1 | 0 | 179000 | 6.2 | 3.2 | 33 |
| 0.0 | 0 | 2 | 8.8 | 14600 | 87 | 9 | 4 | 0 | 0 | 103000 | 5.2 | 2.9 | 74 |
| 0.0 | 0 | 0 | 7.3 | 16200 | 78 | 15 | 6 | 1 | 9 | 110000 | 5.3 | 2.1 | 26 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IGAN | 0 | 2 | 11.3 | 4700 | 65 | 20 | 13 | 2 | 0 | 98000 | 2.2 | 0.7 | 37 |
| 0.0 | 0 | 0 | 6.8 | 18600 | 78 | 12 | 10 | 0 | 0 | 125000 | 7.9 | 2.4 | 97 |
| | 1 | 0 | 8.3 | 900 | 20 | 80 | 0 | 0 | 0 | 8000 | 5.2 | 2.9 | 152 |
| CHOLELITH | 0 | 0 | 7.5 | 4710 | 93 | 5 | 2 | 0 | 0 | 45000 | 4 | 1.5 | 139 |
| 0.0 | 0 | 0 | 2.9 | 22600 | 90 | 7 | 3 | 0 | 0 | 373000 | 6.5 | 4.2 | 148 |
| MYELODYS | 0 | 0 | 8.5 | 1400 | 40 | 60 | 0 | 0 | 0 | 45000 | 6.2 | 2.4 | 333 |
| PARKINSON | 0 | 2 | 13.3 | 13600 | 84 | 10 | 6 | 0 | 0 | 60000 | 5.4 | 2.1 | 221 |
| 0.0 | 1 | | 13.6 | 15500 | 84 | 9 | 7 | 0 | 0 | 270000 | 4.9 | 1.9 | 17 |
| 0.0 | 0 | 2 | 6.8 | 7800 | 66 | 20 | 14 | 0 | 0 | 60000 | 4.7 | 2.3 | 72 |
| 0.0 | 0 | 3 | 10 | 8600 | 56 | 39 | 5 | 0 | 0 | 66000 | 6.5 | 2.7 | 110 |
| 0.0 | 0 | 0 | 15.1 | 16170 | 91 | 4 | 5 | 0 | 0 | 146000 | 6.1 | 3.9 | 57 |
| 0 | 0 | 1 | 12.5 | 37600 | 95 | 4 | 1 | 0 | 0 | 475000 | 7 | 2.7 | 673 |
| 0.0 | 0 | 0 | 13.8 | 12300 | 78 | 8 | 14 | 0 | 0 | 184000 | 5.8 | 4.1 | 29 |
| 0 | 0 | 0 | 15.9 | 10200 | 85 | 9 | 5 | 0 | 0 | 30000 | 5.7 | 2.2 | 274 |
| 0 | 0 | 0 | 8.7 | 4390 | 76 | 10 | 7 | 7 | 0 | 60000 | 4.7 | 1.7 | 82 |
| 0 | 0 | | 6.6 | 68300 | 11 | 16 | 3 | 0 | 70 | 42000 | 6.3 | 4 | 132 |
| 0.0 | 0 | 0 | 11.3 | 28300 | 93 | 4 | 2 | 1 | 0 | 53000 | 7.2 | 3.1 | 79 |
| 0.0 | 0 | 1 | 11.3 | 20700 | 91 | 3 | 2 | 4 | 0 | 218000 | 5.2 | 2.6 | 55 |
| SCLERODER | 0 | 0 | 10.3 | 17400 | 93 | 3 | 4 | 0 | 0 | 371000 | 6.2 | 2.7 | 42 |
| | 0 | 0 | 11.8 | 16100 | 69 | 18 | 13 | 0 | 0 | 135000 | 5.2 | 2.5 | 73 |
| RHEUMATO | 0 | 1 | 9 | 22300 | 88 | 6 | 6 | 0 | 0 | 151000 | 5.9 | 2.9 | 17 |
| 0.0 | 0 | 0 | 14.7 | 16400 | 72 | 14 | 14 | 0 | 0 | 16000 | 5.5 | 3 | 18850 |
| 0 | 0 | 0 | 14.9 | 13000 | 76 | 13 | 11 | 0 | 0 | 148000 | 6.7 | 3.4 | 55 |
| 0.0 | 0 | 0 | 12.4 | 27610 | 88 | 7 | 5 | 0 | 0 | 324000 | 7 | 3 | 26 |
| 0.0 | 0 | 0 | 15.9 | 7830 | 81 | 11 | 8 | 0 | 0 | 235000 | 6 | 3.9 | 439 |
| 0.0 | 0 | 2 | 16.7 | 31300 | 77 | 11 | 2 | 6 | 0 | 212000 | 6.2 | 3.2 | 240 |
| 0.0 | 0 | 0 | 9.9 | 21100 | 92 | 3 | 4 | 0 | 0 | 347000 | 7.2 | 4.4 | 75 |
| 0.0 | 0 | 0 | 15 | 19100 | 60 | 29 | 5 | 6 | 0 | 140000 | 7.1 | 3.8 | 32 |
| 0 | 0 | 0 | 12 | 7900 | 90 | 4 | 6 | 0 | 0 | 116000 | 6.7 | 2 | 118 |
| CHRONICAI | 0 | | 12.4 | 14000 | 78 | 12 | 6 | 4 | 0 | 90000 | 5.7 | 2.3 | 411 |
| 0 | 0 | | 12 | 18200 | 75 | 14 | 8 | 3 | 0 | 176000 | 5.9 | 2.9 | 30 |
| CHRONICAI | 0 | 0 | 7.9 | 18700 | 77 | 16 | 5 | 1 | 0 | 226000 | 5.7 | 2.1 | 156 |
| .00 | 1 | 3 | 9.4 | 9200 | 92 | 5 | 3 | 0 | 0 | 232000 | 5.6 | 2.3 | 60 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 2 | 14.4 | 20850 | 93 | 3 | 4 | 0 | 0 | 73000 | 5.8 | 3 | 296 |
| 0.0 | 0 | 0 | 10.3 | 14070 | 88 | 5 | 1 | 6 | 0 | 145000 | 6.1 | 4.1 | 48 |
| 0.0 | 0 | 0 | 13.7 | 12610 | 79 | 9 | 12 | 0 | 0 | 60000 | 5.6 | 2.9 | 7178 |
| 0.0 | 0 | | 13.5 | 25100 | 86 | 6 | 7 | 1 | 0 | 261000 | 6.6 | 3.4 | 31 |
| 0.0 | 0 | 0 | 11.9 | 20400 | 82 | 14 | 3 | 0 | 0 | 26000 | 6.2 | 2.8 | 82 |

| sgpt | alkphos | SOD | POT | BICARB | URINECULT | BLDCUL | CAUSEAKI1 | CAUSEAKI2 | CAUSEAKI3 | CAUSEAKI4 | DIAG1 | DIAG2 | DIAG3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 40 | 90 | 150 | 3.6 | 30.6 | YES | YES | SEPSIS | | | | SEPSIS - MF | POST CARD | DIABETES M |
| 18 | 81 | 141 | 3.3 | 12.1 | | YES | DRUGS | SEPSIS | | | ACUTE MYI | NEUTROPE | GIARDIASIS |
| 32 | 76 | 113 | 4.7 | 8 | | YES | SEPSIS | | | | LEFT HUN V | NSTEMI | |
| 37 | 76 | 138 | 4.1 | 17.7 | NO | NO | PIGMENT N | SEPSIS | SNAKE ENV | | SNAKE ENV | RIGHT LOW | FILARIAL LE |
| 18 | 43 | 138 | 1.1 | 10.3 | | | RHABDOM | | | | SJOGREN'S | RENAL TUB | HYPOKALEI |
| 22 | 75 | 142 | 3.5 | 16.4 | NO | NO | RHABBOM | SEPSIS | | | RIGHT FRO | STATUS EPI | ASPIRATIO |
| 46 | 336 | 131 | 4.5 | 7 | - | NO | SCRUB | | | | SCRUB TYP | UTI | |
| 48 | 229 | 152 | 4.4 | 17.3 | - | NO | SEPSIS | DRUGS AN | | | DERMATRO | LEFT BREAS | FEBRILE NE |
| 9 | 137 | 135 | 3.4 | 17.7 | | YES | SEPSIS | | | | SEPSIS | | |
| 21 | 78 | 137 | 2.6 | 22.1 | - | - | PRERENAL | | | | ORGANOPH | PROBABLE | ACUTE CHO |
| 91 | 298 | 133 | 4 | 16 | | NO | SCRUB | | | | SCRUB TYP | REFRACTOF | |
| 123 | 56 | 151 | 4.5 | 22.2 | NO | NO | PRERENAL | | | | MONOCRO | INTERMED | ASPIRATIO |
| 12 | 78 | 138 | 5.9 | 14.5 | NO | NO | SEPSIS | DRUG | | | BILATERAL | SYSTEMIC L | DILATED CA |
| 11 | 62 | 141 | 3 | 23.3 | NO | NO | SEPSIS | | | | ILD-NSIP | INFECTIVE | SEPTIC SHO |
| 65 | 174 | 135 | 5.2 | 10 | - | NO | SCRUB | DRUG | | | SCRUB TYP | ARDS | COAGULOF |
| 151 | 333 | 141 | 5.7 | 17 | - | - | SCRUB | | | | SCRUB TYP | RESOLVING | |
| 121 | 88 | 134 | 3.6 | 15 | NO | NO | ACUTE GAS | CRS- NSTEM | | | NON ST ELE | ACUTE GAS | BILATERAL |
| 143 | 196 | 149 | 4.5 | 12 | - | NO | SCRUB | | | | SCRUB TYP | ARDS | GI BLEED |
| 158 | 44 | 137 | 4 | 11.1 | NO | NO | ACUTE SEV | SEPSIS | CRS | | ACUTE SEV | SEIZURES ( | POST CARD |
| 8 | 164 | 150 | 4.1 | 17.3 | - | YES | SEPSIS | DRUGS | | | MYELODYS | GASTRO-IN | ACQUIRED |
| 51 | 32 | 133 | 4 | 20 | NO | YES | SEPSIS | DRUGS | AGE | | APLASTIC A | CRO SEPSIS | |
| 42 | 92 | 137 | 1.8 | 38 | | YES | RHABBOM | SEPSIS | S/P CARDIA | | METABOLI | RHABDOM | SEPSIS |
| 221 | 52 | 129 | 6.3 | 3.61 | - | YES | SEPSIS | CRS-POST A | | | ACUTE EXA | POST CARD | |
| 8 | 80 | 124 | 4.9 | 20 | NO | NO | SEPSIS | | | | COPD - INF | TYPE 2 RES | |
| 16 | 704 | 143 | 3.4 | 14.2 | - | YES | SEPSIS | DRUG | | | HEMAOPH | SEPSIS WIT | PERIPORTA |
| 10 | 56 | 130 | 5 | 18.8 | | NO | CRS | SEPSIS | | | ACUTE DET | VENTRICUL | VENTILATO |
| 168 | 82 | 141 | 3.5 | 15 | - | | RHABBOM | | | | SUPER VAS | | |
| 13 | 70 | 139 | 3.7 | 21 | - | - | PIGMENT N | SNAKE ENV | | | SNAKE ENV | RIGHT LOW | |
| 16 | 57 | 134 | 3.4 | 19 | - | NO | ? CARDIOG | SEPSIS | | | ISCHEMIC C | ASPIRATIO | ATRIAL FIB |
| 29 | 48 | 139 | 5.2 | 18.6 | | NO | SEPSIS | CARDIOGE | | | PNEUMON | ACUTE COF | |
| 19 | 149 | 151 | 3.7 | 31 | | NO | ACUTE PAN | SEPSIS | | | ACUTE SEV | SEVERE SEF | DKA |
| 166 | 711 | 139 | 4 | 14 | - | NO | SEPSIS | | | | DISSEMINA | SEPTIC SHO | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 476 | 33 | 144 | 3.6 | 16.8 | | YES | SEPSIS | RHABDOM | | | MENINGOE | GTCS | SEPSIS WIT |
| 167 | 230 | 153 | 3.2 | 36.8 | - | NO | SEPSIS | | | | SPONTANE | RHEUMATI | |
| 67 | 81 | 130 | 3.4 | 16.4 | - | YES | SEPSIS | | | | STAPHYLO | STATUS EP | ISCHEMIC |
| 37 | 104 | 131 | 4.6 | 24.7 | NO | NO | ?DEHYDRA | | | | ACUTE EXA | OBSTRUCTI | |
| 19 | 62 | 145 | 4.3 | 19.9 | 1 | | SEPSIS | | | | RCC OPERA | LUNG BON | |
| 328 | 140 | 146 | 4 | 20.6 | NO | NO | ECCLAMPS | CARDIOGE | SEPSIS | | 3.STATUS P | ANTEPARTI | RIGHT LOW |
| 84 | 331 | 137 | 3.9 | 20.7 | NO | NO | SCRUB | | | | SCRUB TYP | ACUTE RES | MYOCARDI |
| 412 | 120 | 148 | 6.3 | 15.6 | NO | NO | SCRUB TYP | SEPSIS | | | SCRUB TYP | FOURNIER' | HOSPITAL A |
| 41 | 122 | 125 | 4.7 | 19 | - | YES | SEPSIS | | | | LOWER RES | ALCOHOL D | |
| 7 | 47 | 135 | 3.4 | 14.4 | NO | YES | SEPSIS | ACUTE PYE | | | ACUTE PYE | GRAM NEG | |
| 33 | 91 | 133 | 2.9 | 13.8 | - | YES | SEPSIS | ??DISSEMI | | | DISSEMINA | CANDIDA S | |
| 27 | 155 | 140 | 4.7 | 10 | | NO | SCRUB | | | | SCRUB TYP | ARDS | |
| 139 | 192 | 123 | 4.3 | 11 | - | NO | ?HRS | SEPSIS | | | MEDIASTIN | ACUTE LIVE | SEPTIC SHO |
| 341 | 64 | 131 | 4.8 | 10 | | YES | SEPSIS | ? OBS.URO | | | CARCINOM | UROSEPSIS | PSEUDO IN |
| 13 | 41 | 143 | 2.9 | 8 | NO | YES | SEPSIS | ACUTE GAS | | | LEFT FOOT | PROBABLE | |
| 19 | 52 | 127 | 3.9 | 17 | - | NO | PIGMENT N | SNAKE BITE | | | SNAKE BITE | RIGHT LOW | |
| 62 | 44 | 129 | 3.9 | 17 | - | YES | HRS | SEPSIS | | | DECOMPEN | SPONTANE | NECROTISI |
| 22 | 112 | 129 | 3.5 | 17.9 | NO | NO | SEPSIS | ACUTE PYE | | | B/L ACUTE | POST PCN | |
| 17 | 671 | 129 | 5.3 | 17 | - | NO | SEPSIS | POST CARD | | | SEPSIS WIT | HYPOXIC IS | POST-CARD |
| 68 | 119 | 131 | 3.5 | 13 | - | YES | SCRUB | SEPSIS | | | SCRUB TYP | ARDS | |
| 20 | 61 | 140 | 4.4 | 16 | NO | - | PIGMENT N | SNAKE ENV | | | SNAKE ENV | LEFT LEG C | |
| 9 | 113 | 139 | 3.2 | 24.9 | NO | NO | SEPSIS | ??? | | | 4.PROBABL | ACUTE RES | SEPSIS WIT |
| 29 | | 128 | 5.3 | 17 | NO | NO | SEPSIS | | | | COMMUNI | ORAL CAND | |
| 19 | 65 | 142 | 2.8 | 27 | - | - | ACUTE GAS | DRUGS | | | PERICARDI | ACUTE GAS | SYMPTOM |
| 54 | 30 | 134 | 3.8 | 13.4 | - | - | PIGMENT N | SNAKE ENV | | | SNAKE ENV | RIGHT LOW | |
| 9 | 174 | 146 | 3.4 | 24 | | | SEPSIS | DRUGS | | | PRE B CELL | CANDIDA S | |
| 10 | | 123 | 5.9 | 9 | NO | NO | ?VASCULIT | SEPSIS | | | OVERLAP S | NSTEMI | LRTI WITH |
| 58 | 83 | 132 | 2.7 | 27.7 | - | NO | ANAPHYLA | | | | MOTOR NE | PULMONAI | TYPE II RES |
| 14 | 473 | 133 | 4.3 | 12.7 | NO | YES | SEPSIS | | | | E.COLI SEP | MODS | |
| 2337 | 235 | 137 | 5 | 5 | | | DENGUE H | | | | ACUTE FEB | DIC | ACUTE RES |
| 39 | 22 | 125 | 2.8 | 11.3 | - | NO | ACUTE GAS | | | | ACUTE GAS | | |
| 33 | 80 | 138 | 4.3 | 23.7 | | NO | HAEM PIGN | | | | RUSSEL VIP | | |
| 12 | 53 | 154 | 3.4 | 21 | | NO | SEPSIS | DRUG | | | INFECTED F | HOSPITAL A | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 181 | 133 | 1.7 | 14 | NO | YES | SEPSIS | DRUG | | | CARBAPEN | PROBABLE | COAGULOP |
| 25 | 160 | 146 | 3.3 | 15.9 | NO | YES | SEPSIS | | | | DECOMPEN | NFGNB SEP | HEPATIC EN |
| 61 | 125 | 137 | 3.8 | 16.2 | NO | - | DRUGS | DISSEMINA | SEPSIS | | DISSEMINA | TYPE 1 RES | MULTIORG |
| 35 | 110 | 138 | 2.6 | 30.6 | | YES | SEPSIS | | | | SEPSIS - VR | CHOLANGIT | |
| 48 | 89 | 141 | 4.8 | 13 | | NO | PIGMENT | | | | MULTIPLE I | AUTOIMMU | |
| 122 | 56 | 130 | 4.1 | 7.3 | - | NO | SEPSIS | DRUG | | | MYELODYS | APENDICUL | REFRACTOI |
| 81 | 53 | 131 | 4.2 | 15.3 | | NO | SCRUB | | | | SCRUB TYP | REFRACTOI | |
| 12 | 111 | 136 | 4.2 | 20.3 | | NO | | | | | TUBERCULO | ASPIRATIOI | ALCOHOL V |
| 42 | 225 | 138 | 4.3 | 11.8 | - | NO | SEPSIS | PIGMENT N | SEPTIC SHO | | DIFFUSE LA | MACROPHA | REFRACTOI |
| 18 | 379 | 130 | 5.2 | 25.9 | | | SCRUB | | | | SCRUB | MENINGOE | ?ACS |
| 20 | 47 | 142 | 2.1 | 13 | - | NO | RHABBOM | SNAKE ENV | | | SNAKE ENV | LEFT LEG C | |
| 381 | 72 | 145 | 3.8 | 18.4 | - | NO | ??SEPSIS | ?NSTEMI -C | | | RIGHT MID | POST TBLB | NSTEMI |
| 15 | 67 | 139 | 3.8 | 20 | - | NO | | | | | COMPLETE | PYRETHRO | HYPOXIC IS |
| 87 | 254 | 135 | 3.9 | 13 | - | NO | SCRUB | | | | SCRUB TYP | ACUTE RES | |
| 15 | 344 | 134 | 3.6 | 25.7 | | NO | DRUGS | | | | TUBERCULO | PULMONAI | ATT INDUC |
| 48 | 167 | 146 | 5.4 | 19 | | NO | TUMOUR L | | | | T - CELL AC | ANTERIOR | TUMOR LY |
| 49 | 281 | 138 | 4.3 | 15 | | - | 0 | SCRUB | | | SCRUB TYP | ARDS | |
| 23 | 97 | 139 | 4.5 | 15 | NO | NO | SEPSIS | NSTEMI-CR | | | RIGHT MID | ACUTE COP | SEPSIS |
| 6 | 98 | 139 | 5.3 | 20 | | | POST CARD | | | | INTERSTITI | SCLERODEF | ACUTE TYP |
| 98 | 353 | 140 | 5.5 | 12.9 | | | ECCLAMPS | | | | SEVERE PRI | ACUTE FAT | |
| 6 | 238 | 147 | 4.8 | 12.5 | NO | YES | SEPSIS | DRUGS-ARI | | | UROSEPSIS | CRITICAL C | |
| 4600 | 378 | 128 | 4.9 | 4 | | NO | DENGUE H | ??? | | | DENGUE H | MODS WIT | |
| 22 | 46 | 133 | 3.4 | 21 | - | YES | SEPSIS | | | | B/L THALA | ASPIRATIOI | ABDOMINA |
| 18 | 160 | 133 | 3 | 7 | - | | DRUG | DEHYDRAT | | | DIABETIC K | RHINO OCU | INTRACRAN |
| 261 | 46 | 147 | 4.3 | 15 | - | NO | POST CARD | | | | HYPOXIC IS | PROBABLE | |
| 111 | 42 | 131 | 5.2 | 21 | - | NO | CRS- NSTEM | SEPSIS | | | NON ST SE | ACUTE INFI | |
| 12 | 41 | 140 | 4.8 | 10 | | | RHABDOM | | | | GTCS PROB | | |
| 134 | 109 | 158 | 3.4 | 19 | - | NO | DEHYDRAT | | | | ADENOCAR | 3RD VENTR | |
| 10 | 163 | 132 | 3.4 | 10.4 | | YES | HEPATORE | SEPSIS | | | DECOMPEN | SPONTANE | SEPTIC SHO |
| 76 | 179 | 122 | 4 | 27 | | NO | SCRUB | SEPSIS | | | SCRUB TYP | ARDS | |
| 12 | 75 | 129 | 4.1 | 9.2 | - | NO | SEPSIS | POST CARD | | | ACUTE FEB | STATUS PO | |
| 39 | 282 | 143 | 2.8 | 37 | NO | NO | ACUTE PAN | SEPSIS | | | ALCOHOLIC | ACUTE PAN | STATUS EP |
| 45 | 167 | 132 | 4.4 | 7 | - | NO | DRUGS | | | | VARICELLA | TUBERCULO | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 146 | 98 | 141 | 3.3 | 7 | - | NO | ACUTE PAN | SEPTIC SHC | SEPSIS | | ACUTE PAN | ACUTE ALC | SEPTIC SHC |
| 11 | 79 | 133 | 2.6 | 10 | | | | | | | | | |
| 496 | 44 | 154 | 3.6 | 15 | - | NO | RHABBOM' | THIRD SPA( | | | PROBABLE | GTCS ? ALC | |
| 10 | 100 | 139 | 3.3 | 20 | | NO | CRS-NSTEM | SEPSIS | | | ACS-NSTEM | PROBABLE | |
| 32 | 170 | 135 | 4.1 | 17.6 | - | | SCRUB | ?CRS 1 | | | SCRUB TYP | CONGESTIV | |

| DIAG4 | PH1 | PCO21 | P1 | NA1 | K1 | CL1 | CA1 | GLU1 | LAC1 | HB1 | BEC1 | HCO31 | F1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7.51 | 38 | 82 | 150 | 3.5 | 118 | 4.37 | 251 | 1.5 | 9.1 | 7.3 | 30.3 | 24 |
| | 7.44 | 19 | 180 | 143 | 3 | 111 | 3.79 | 194 | 8.2 | 7 | -11.3 | 12.9 | 100 |
| | 7.3 | 25 | 322 | 113 | 4.5 | 84 | 3.81 | 298 | 5.5 | 9.7 | -14.1 | 12.3 | 100 |
| | 7.16 | 26 | 208 | 130 | 4.8 | 104 | 3.6 | 347 | 6.1 | 13.5 | -19.4 | 9.3 | 60 |
| | 7.4 | 20 | 133 | 151 | 2.4 | 123 | 3.63 | 138 | 1.5 | 10.3 | -12.4 | 12.4 | 24 |
| | 7.37 | 35 | 81 | 144 | 3.9 | 119 | 4.55 | 130 | 0.9 | 13 | -5.1 | 20.2 | 40 |
| | 7 | 20 | 127 | 132 | 5.6 | 111 | 3.33 | 219 | 7.1 | 12.1 | -26.4 | 4.9 | 60 |
| SEPTIC SHC | 7.29 | 36 | 101 | 152 | 4.4 | 118 | 4.2 | 217 | 6.3 | 16.7 | -9.3 | 17.3 | 100 |
| | 7.28 | 34 | 248 | 151 | 3.1 | 121 | 4.96 | 236 | 1.8 | 11 | -10.7 | 16 | 60 |
| | 7.32 | 45 | 89 | 136 | 4.9 | 103 | 4.58 | 161 | 2.6 | 15 | -2.9 | 23.2 | 30 |
| | 7.16 | 30 | 71 | 138 | 4.5 | 103 | 3.98 | 257 | 7.5 | 17.2 | -18 | 10.7 | 80 |
| | 7.47 | 33 | 51 | 152 | 3.5 | 122 | 4.52 | 175 | 1.2 | 14.1 | 0.3 | 24 | 40 |
| DISTAL SEN | 7.37 | 28 | 101 | 141 | 6 | 113 | 4.53 | 131 | 1.7 | 12.6 | -9.1 | 16.2 | 100 |
| ACUTE TYP | 7.39 | 51 | 48 | 137 | 4.1 | 105 | 4.36 | 91 | 1.2 | 10.5 | 5.9 | 30.9 | 80 |
| | 7.22 | 21 | 67 | 135 | 5.2 | 108 | 3.68 | 143 | 6.2 | 15.1 | -19.1 | 8.6 | 50 |
| | 7.32 | 29 | 76 | 142 | 5.2 | 118 | 4.79 | 260 | 2.9 | 11.2 | -11.2 | 14.9 | 50 |
| | 7.28 | 32 | 62 | 134 | 3.6 | 104 | 3.77 | 332 | 1.5 | 11.2 | -11.7 | 15 | 90 |
| | 7.27 | 23 | 52 | 143 | 4.5 | 123 | 4.08 | 188 | 2.7 | 7.6 | -16.3 | 10.6 | 35 |
| GASTRIC AI | 7.31 | 22 | 60 | 137 | 4 | 107 | 2.83 | 275 | 5.7 | 12.7 | -15.2 | 11.1 | 50 |
| FEBRILE NE | 7.43 | 26 | 71 | 148 | 3.4 | 116 | 4.46 | 245 | 4.1 | 12.5 | -7 | 17.3 | 80 |
| | 7.34 | 28 | 83 | 132 | 3.6 | 107 | 4.13 | 138 | 3.5 | | -10.7 | 15.1 | 30 |
| | 7.34 | 61 | 77 | 137 | 1.6 | 101 | 3.29 | 229 | 2 | 11.9 | 7.1 | 32.9 | 28 |
| | 7.1 | 37 | 138 | 126 | 6.7 | 94 | 4.55 | 632 | 10.7 | 11.1 | -18.2 | 11.5 | 50 |
| | 7.24 | 65 | 57 | 132 | 4 | 100 | 4.04 | 128 | 1 | 8.4 | 0.5 | 27.9 | 40 |
| | 7.07 | 49 | 64 | 143 | 3.4 | 104 | 4.04 | 87 | 15 | 8.6 | -15.9 | 14.2 | 100 |
| RIGHT LEG | 7.39 | 38 | 74 | 132 | 4.9 | 104 | 4.04 | 86 | 0.8 | 14.7 | -2 | 23 | 70 |
| | 7.45 | 33 | 87 | 138 | 3.6 | 103 | 4.24 | 187 | 2.6 | 13.5 | -1.1 | 22.9 | 21 |
| | 7.37 | 34 | 66 | 143 | 3.2 | 113 | 4.49 | 103 | 2.9 | 11.8 | -5.6 | 19.7 | 21 |
| | 7.34 | 42 | 50 | 137 | 3.4 | 103 | 4.34 | 170 | 1.9 | 14.9 | -3.1 | 22.7 | 60 |
| | 7.07 | 47 | 95 | 134 | 4.8 | 102 | 3.4 | 199 | 6.7 | 15.7 | -16.5 | 13.6 | 100 |
| | 7.51 | 37 | 68 | 155 | 2.7 | 121 | 4.44 | 218 | 1.1 | 10.2 | 6.5 | 29.5 | 21 |
| | 7.04 | 17 | 132 | 143 | 1.9 | 119 | 2.26 | 128 | 8.2 | 10.3 | -26 | 4.6 | 50 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7.11 | 39 | 290 | 141 | 3.4 | 117 | 3.97 | 241 | 2.8 | 12.4 | -17.1 | 12.4 | 100 |
| | 7.45 | 53 | 127 | 158 | 3.2 | 120 | 4.38 | 226 | 1.5 | 13.6 | 12.8 | 36.8 | 35 |
| | 7.22 | 33 | 102 | 138 | 3.5 | 106 | 3.68 | 455 | 2.8 | 12.2 | -14.2 | 13.5 | 40 |
| | 7.3 | 69 | 53 | 138 | 3.6 | 99 | 4.45 | 178 | 0.9 | 11.2 | 7.6 | 34 | 30 |
| | 7.35 | 36 | 99 | 145 | 4.3 | 116 | 3.65 | 246 | 2.1 | | -5.7 | 19.9 | 40 |
| SEPSIS MOI | 7.42 | 30 | 93 | 138 | 5.7 | 113 | 3.61 | 161 | 3.4 | 14.5 | -5 | 19.5 | 50 |
| | 7.4 | 35 | 150 | 139 | 4 | 109 | 3.54 | 151 | 1.3 | 10.2 | -3.1 | 21.7 | 100 |
| BILIARY SEI | 7.26 | 37 | 135 | 150 | 6.1 | 120 | 3.29 | 106 | 4.8 | 12 | -10.5 | 16.6 | 100 |
| | 7.08 | 58 | 51 | 127 | 4.7 | 96 | 4.36 | 251 | 4.7 | 13.8 | -12.8 | 17.2 | 30 |
| | 7.26 | 32 | 61 | 135 | 3.4 | 105 | 4.11 | 259 | 3.5 | 10.9 | -12.7 | 14.4 | 60 |
| | 7.35 | 23 | 49 | 136 | 4.4 | 108 | 3.78 | 91 | 7.5 | 10.8 | -12.9 | 12.7 | 25 |
| | 7.17 | 27 | 42 | 142 | 3.8 | 118 | 3.61 | 98 | 3.7 | 11.3 | -18.7 | 9.8 | 100 |
| | 7.25 | 27 | 170 | 121 | 4.2 | 99 | 3.96 | 110 | 3.8 | 11.1 | -15.4 | 11.8 | 60 |
| | 7.3 | 29 | 126 | 131 | 4.3 | 104 | 3.79 | 128 | 4.4 | 9.1 | -12.1 | 14.3 | 30 |
| | 6.99 | 30 | 124 | 140 | 3.1 | 107 | 3.34 | 161 | 11.3 | 14.5 | -24.2 | 7.2 | 100 |
| | 7.41 | 30 | 105 | 129 | 3.5 | 101 | 4.05 | 131 | 4.1 | 9.5 | -5.6 | 19 | 40 |
| SEPSIS WIT | 7.2 | 37 | 61 | 131 | 4 | 102 | 4.74 | 139 | 8.3 | 10.6 | -13.5 | 14.5 | 60 |
| | 7.28 | 32 | 99 | 134 | 4.1 | 105 | 4.68 | 189 | 2.8 | 10.7 | -11.7 | 15 | 28 |
| | 7.09 | 92 | 66 | 132 | 5.2 | 106 | 4.38 | 261 | 1.4 | 9.4 | -1.9 | 27.9 | 50 |
| | 7.38 | 25 | 69 | 134 | 3.6 | 106 | 3.49 | 98 | 2.8 | 13.7 | -10.3 | 14.8 | 60 |
| | 7.31 | 28 | 90 | 135 | 4.1 | 108 | 4.27 | 111 | 3 | | -12.2 | 14.1 | 21 |
| | 7.36 | 44 | 87 | 139 | 3.2 | 112 | 3.37 | 196 | 1.8 | 8.7 | -0.5 | 24.9 | 50 |
| | 7.39 | 37 | 46 | 132 | 3.9 | 102 | 4 | 235 | 1.9 | 9.4 | -2.6 | 22.4 | 30 |
| HYPERTENS | 7.48 | 42 | 102 | 141 | 4.1 | 107 | 4.18 | 140 | 0.9 | 10.5 | 7.8 | 31.3 | 30 |
| | 7.33 | 36 | 395 | 135 | 4.4 | 103 | 3.71 | 110 | 2.6 | 13.7 | -6.9 | 19 | 80 |
| | 7.44 | 36.3 | 110 | 145 | 3.4 | 112 | 4.1 | 90 | 2.3 | 9 | 0.4 | 24 | 80 |
| | 7.13 | 37 | 38 | 128 | 5.9 | 105 | 4.56 | 183 | 1.9 | 9.2 | -16.9 | 12.3 | 100 |
| MRI CONTI | 7.28 | 59 | 57 | 132 | 3 | 102 | 4.02 | 141 | 1 | 18.6 | 1 | 27.7 | 30 |
| | 7.11 | 37 | 68 | 136 | 4.4 | 106 | 4.2 | 306 | 5.2 | 17.9 | -17.7 | 11.8 | 60 |
| HEPATIC D | 7.14 | 16 | 211 | 134 | 4.7 | 106 | 3.18 | 276 | 13.2 | 7.5 | -23.6 | 5.4 | 100 |
| | 7.38 | 26 | 80 | 137 | 4.3 | 111 | 4.42 | 166 | 1.2 | | -9.7 | 15.4 | 21 |
| | 7.33 | 34 | 56 | 139 | 4.6 | 110 | 4.57 | 213 | 1.5 | 13 | -8 | 17.9 | 40 |
| | 7.44 | 36 | 111 | 151 | 3.1 | 119 | 4.84 | 168 | 2.6 | 7.5 | 0.3 | 24.5 | 40 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 119 | | | | | | | |
| | 7.43 | 24 | 101 | 146 | 2.8 | 124 | 4.53 | 175 | 1.6 | 6 | -8.4 | 15.9 | 60 |
| | 7.3 | 33 | 148 | 137 | 3.8 | 106 | 3.81 | 166 | 5.6 | 7.2 | -10.2 | 16.2 | 50 |
| | 7.53 | 40 | 79 | 137 | 2.2 | 101 | 3.78 | 74 | 5.3 | 7.5 | 10.7 | 33.4 | 100 |
| | 7.35 | 25 | 137 | 147 | 4.1 | 114 | 4.34 | 333 | 8.7 | | -11.8 | 13.8 | 40 |
| | 7.16 | 14 | 308 | 134 | 3.6 | 98 | 4.66 | 111 | 19.5 | 8.5 | -23.7 | 5 | 60 |
| | 7.25 | 25 | 77 | 136 | 2.7 | 113 | 1.41 | 94 | 0.8 | 9.5 | -16.2 | 11 | 31 |
| | 7.5 | 26 | 70 | 136 | 4.2 | 107 | 4.5 | 150 | 2.4 | 13 | -2.9 | 20.3 | 100 |
| | 7.4 | 19 | 108 | 138 | 4.2 | 104 | 3.56 | 100 | 10.3 | 7.2 | -13 | 11.8 | 25 |
| | 7.44 | 29 | 140 | 138 | 4.2 | 108 | 4.35 | 101 | 3 | 9.8 | -4.5 | 19.7 | 50 |
| | 7.4 | 36 | 88 | 137 | 3.6 | 107 | 3.88 | 200 | 3.3 | 12.2 | -2.5 | 22.3 | 28 |
| | 7.26 | 43 | 86 | 145 | 3.8 | 112 | 4.6 | 164 | 2.1 | 14.2 | -7.8 | 19.3 | 100 |
| | 7.45 | 25 | 278 | 139 | 3.6 | 113 | 4.12 | 147 | 2.9 | 16.2 | -6.6 | 17.4 | 100 |
| | 7.03 | 56 | 70 | 131 | 4.6 | 110 | 3.6 | 151 | 4.2 | 15.7 | -16 | 14.8 | 90 |
| | 7.54 | 30 | 206 | 134 | 3.6 | 104 | 3.37 | 122 | 0.8 | 9.4 | 3.2 | 25.7 | 40 |
| SEPSIS, MU | 6.95 | 23 | 174 | 143 | 5.8 | 111 | 4.41 | 398 | 15.2 | 6.8 | -27 | 5.1 | 60 |
| | 7.35 | 38 | 70 | 141 | 4.2 | 108 | 4.2 | 158 | 2.9 | 10.8 | -4.6 | 21 | 80 |
| | 7.19 | 17 | 40 | 147 | 4.5 | 132 | 1.91 | 44 | 1 | 11.6 | -21.7 | 6.5 | 60 |
| | 7.2 | 53 | 52 | 141 | 6.6 | 111 | 4.65 | 69 | 4.6 | 10 | -7.3 | 20.7 | 100 |
| | | | 68 | | | | | | | | | | 21 |
| | 7.23 | 34.4 | 81.2 | 147 | 4.3 | 122 | 4.16 | 114 | 1.4 | 9.9 | -12.3 | 13.9 | 21 |
| | 6.88 | 30 | 73 | 134 | 5.1 | 104 | 3.92 | 170 | 17.2 | 10.7 | -27.6 | 5.6 | 100 |
| ATRIAL FIBI | 7.43 | 32 | 72 | 133 | 3.5 | 101 | 4.16 | 143 | 1.4 | 14 | -3.1 | 21.2 | 30 |
| HYPERTENS | 7.22 | 12 | 95 | 147 | 3 | 124 | 4.95 | 296 | 0.9 | 14.5 | -22.8 | 4.9 | 28 |
| | 7.34 | 33 | 534 | 138 | 2.6 | 104 | 3.84 | 250 | 5.3 | 16.5 | -8 | 17.8 | 100 |
| | 7.21 | 64 | 51 | 136 | 3.8 | 100 | 3.95 | 354 | 4.4 | 15.8 | -2.3 | 25.6 | 100 |
| | 7.36 | 28 | 128 | 129 | 3.8 | 106 | 4 | 126 | 0.9 | 10.9 | -9.6 | 15.8 | 30 |
| | 7.42 | 30 | 125 | 140 | 2.6 | 113 | 4.2 | 106 | 2.4 | | -5 | 19.5 | 21 |
| | | | | | | | | | | | | | |
| | 7.4 | 27 | 70 | 131 | 3.2 | 100 | 4.63 | 238 | 2.5 | 15.3 | -8.1 | 16.7 | 30 |
| | 7.09 | 33 | 78 | 130 | 4.5 | 101 | 4.69 | 111 | 8.5 | 14 | -19.8 | 10 | 40 |
| HYPOXIC IS | 7.55 | 39 | 145 | 147 | 3.5 | 108 | 3.95 | 203 | 3 | 6.8 | 11.7 | 34.1 | 100 |
| | 7.25 | 23 | 109 | 129 | 4.1 | 107 | 4.44 | 102 | 0.8 | 10.5 | -17.1 | 10.1 | 21 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7.2 | 37 | 51 | 138 | 3.2 | 105 | 3.15 | 343 | 5.1 | 10.5 | -13.5 | 14.5 | 60 |
| | 7.15 | 32 | 59 | 137 | 3.4 | 114 | 4.3 | 117 | 1.1 | 12.4 | -17.8 | 11.1 | 28 |
| | 7.19 | 31 | 240 | 134 | 6.6 | 104 | 2.33 | 604 | 2.8 | 13.4 | -16.4 | 11.8 | 100 |
| | 7.03 | 34 | 76 | 145 | 2.2 | 105 | 4.43 | 314 | 17.5 | 13.5 | -21.8 | 9 | 30 |
| | | | | | | | | | | | | | |

| PF1 | PF1COD | PR1 | SBP1 | DBP1 | CVS1 | PLATE1 | PLAT1COD | GCS1 | GCS11 | GCS1COD | vent1 | BIL1 | BIL1COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 341.67 | 1 | 100 | 130 | 80 | 0 | 225000 | 0 | 4T | 6 | 3 | 1 | 0.7 | 0 |
| 180 | 2 | 160 | 106 | 46 | 4 | 18000 | 4 | 15 | 15 | 0 | 0 | 0.72 | 0 |
| 322 | 1 | 85 | 130 | 75 | 3 | 410000 | 0 | 5TS | 9 | 3 | 1 | 0.9 | 0 |
| 346.67 | 1 | 110 | 120 | 80 | 4 | 105000 | 1 | 2T | 3 | 4 | 1 | 0.97 | 0 |
| 554.17 | 0 | 100 | 110 | 70 | 4 | 400000 | 0 | 5T | 7 | 3 | 1 | 0.9 | 0 |
| 202.5 | 2 | 110 | 120 | 70 | 0 | 297000 | 0 | 4TS | 6 | 3 | 1 | 0.64 | 0 |
| 211.67 | 2 | 130 | 130 | 80 | 4 | 45000 | 3 | 4T | 6 | 3 | 1 | 1.91 | 1 |
| 101 | 3 | 130 | 120 | 70 | 4 | 90000 | 2 | 4T | 6 | 3 | 1 | 0.3 | 0 |
| 413.33 | 0 | 100 | 120 | 70 | 4 | 228000 | 0 | 2T | 3 | 4 | 1 | 0.55 | 0 |
| 296.67 | 2 | 100 | 110 | 60 | 4 | 404000 | 0 | 2TS=4T | 6 | 3 | 1 | 0.9 | 0 |
| 88.75 | 4 | 140 | 120 | 65 | 4 | 60000 | 2 | 2T | 3 | 4 | 1 | 4.5 | 2 |
| 127.5 | 3 | 80 | 130 | 75 | 0 | 133000 | 1 | 2T | 3 | 4 | 1 | 4.3 | 2 |
| 101 | 3 | 110 | 120 | 65 | 4 | 146000 | 1 | 7T | 10 | 2 | 1 | 0.5 | 0 |
| 60 | 4 | 125 | 110 | 60 | 3 | 191000 | 0 | 3TS=5T | 6 | 3 | 1 | 0.4 | 0 |
| 134 | 3 | 120 | 110 | 65 | 4 | 70000 | 2 | 3TS=5T | 6 | 3 | 1 | 1.4 | 1 |
| 152 | 3 | 110 | 100 | 60 | 0 | 60000 | 2 | 3TS=5T | 7 | 3 | 1 | 11.2 | 3 |
| 68.89 | 4 | 130 | 110 | 65 | 4 | 2330000 | 0 | 2TS | 3 | 4 | 1 | 1.3 | 1 |
| 148.57 | 2 | 100 | 120 | 70 | 0 | 70000 | 2 | 15 | 15 | 0 | 0 | 0.9 | 0 |
| 120 | 3 | 100 | 130 | 80 | 4 | 75000 | 2 | 4T | 6 | 3 | 1 | 2.3 | 2 |
| 88.75 | 4 | 120 | 130 | 80 | 0 | 14000 | 4 | 4TS | 5 | 4 | 1 | 4 | 2 |
| 276.67 | 2 | 140 | 110 | 50 | 3 | 15000 | 4 | 15 | 15 | 0 | 0 | 1 | 0 |
| 275 | 2 | 70 | 110 | 65 | 4 | 213000 | 0 | 10T | 13 | 1 | 1 | 0.5 | 0 |
| 276 | 2 | 100 | 130 | 55 | 4 | 177000 | 0 | 5T | 7 | 3 | 1 | 0.4 | 0 |
| 142.5 | 3 | 95 | 120 | 65 | 4 | 318000 | 0 | 2TS=3T | 5 | 4 | 1 | 0.5 | 0 |
| 64 | 4 | 120 | 120 | 75 | 3 | 61000 | 2 | 4TS=5T | 7 | 3 | 1 | 6.3 | 3 |
| 105.71 | 3 | 100 | 120 | 80 | 0 | 369000 | 0 | 6T | 9 | 3 | 1 | 0.27 | 0 |
| 414.29 | 0 | 80 | 150 | 90 | 0 | 262000 | 0 | 15 | 15 | 0 | 0 | 1.3 | 1 |
| 314.29 | 1 | 100 | 100 | 60 | 3 | 94000 | 2 | 15 | 15 | 0 | 0 | 4 | 2 |
| 83.33 | 4 | 100 | 130 | 70 | 3 | 185000 | 0 | 4TS=6T | 9 | 3 | 1 | 2 | 2 |
| 95 | 4 | 115 | 115 | 65 | 4 | 124000 | 1 | 2T | 3 | 4 | 1 | 1.4 | 1 |
| 323.81 | 1 | 110 | 140 | 75 | 0 | 400000 | 0 | 15 | 15 | 0 | 0 | 0.53 | 0 |
| 264 | 2 | 120 | 100 | 65 | 4 | 165000 | 0 | 2TS=3T | 4 | 4 | 1 | 0.88 | 0 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 290 | 2 | 130 | 140 | 80 | 4 | 15000 | 4 | 2T | 3 | 4 | 1 | 1.6 | 1 |
| 362.86 | 1 | 120 | 110 | 70 | 0 | 150000 | 1 | 7T | 10 | 2 | 1 | 0.6 | 0 |
| 255 | 2 | 90 | 110 | 70 | 4 | 167000 | 0 | 2TS | 3 | 4 | 1 | 0.45 | 0 |
| 176.67 | 2 | 105 | 130 | 70 | 0 | 346000 | 0 | 15 | 15 | 0 | 0 | 0.66 | 0 |
| 247.5 | 2 | 110 | 130 | 80 | 0 | 126000 | 1 | 6T | 8 | 3 | 1 | 0.7 | 0 |
| 186 | 2 | 100 | 120 | 70 | 0 | 204000 | 0 | 15 | 15 | 0 | 0 | 0.7 | 0 |
| 150 | 2 | 80 | 120 | 70 | 4 | 190000 | 0 | 15 | 15 | 0 | 0 | 7 | 3 |
| 135 | 3 | 126 | 110 | 70 | 4 | 21000 | 3 | 5T | 7 | 3 | 1 | 1.33 | 1 |
| 170 | 3 | 90 | 100 | 50 | 4 | 66000 | 2 | 2TS=5T | 7 | 3 | 1 | 2.4 | 2 |
| 101.67 | 3 | 115 | 110 | 65 | 4 | 155000 | 0 | 2TS | 6 | 3 | 1 | 0.3 | 0 |
| 196 | 2 | 120 | 120 | 80 | 0 | 60000 | 2 | 15 | 15 | 0 | 0 | 0.9 | 0 |
| 42 | 4 | 118 | 140 | 70 | 3 | 60000 | 2 | 3TS=5T | 7 | 3 | 1 | 1.87 | 1 |
| 283.33 | 2 | 100 | 110 | 70 | 4 | 32000 | 3 | 4T | 6 | 3 | 1 | 18.9 | 4 |
| 420 | 0 | 110 | 130 | 70 | 4 | 150000 | 1 | 15 | 15 | 0 | 0 | 1 | 0 |
| 124 | 3 | 120 | 105 | 70 | 4 | 164000 | 0 | 6TS=9T | 11 | 2 | 1 | 1.4 | 1 |
| 262.5 | 2 | 80 | 130 | 80 | 4 | 30000 | 3 | 2TS | 4 | 4 | 1 | 2.4 | 2 |
| 101.67 | 2 | 120 | 100 | 70 | 4 | 45000 | 3 | 15 | 15 | 0 | 0 | 5 | 2 |
| 353.57 | 1 | 110 | 120 | 70 | 3 | 90000 | 2 | 15 | 15 | 0 | 0 | 1.1 | 0 |
| 132 | 3 | 140 | 100 | 70 | 4 | 138000 | 1 | 3TS=5T | 7 | 3 | 1 | 3.7 | 2 |
| 115 | 2 | 112 | 110 | 70 | 0 | 75000 | 2 | 15 | 15 | 0 | 0 | 2.3 | 2 |
| 428.57 | 0 | 110 | 120 | 65 | 0 | 150000 | 1 | 15 | 15 | 0 | 0 | 2.5 | 2 |
| 174 | 3 | 100 | 115 | 70 | 4 | 118000 | 1 | 9TS=10T | 10 | 2 | 1 | 1.9 | 1 |
| 153.33 | 3 | 80 | 140 | 90 | 0 | 143000 | 1 | 7T | 10 | 2 | 1 | 0.4 | 0 |
| 340 | 1 | 50 | 140 | 60 | 0 | 300000 | 0 | 15 | 15 | 0 | 0 | 0.8 | 0 |
| 493.75 | 0 | 105 | 130 | 60 | 3 | 67000 | 2 | 6TS=8T | 9 | 3 | 1 | 10 | 3 |
| 137.5 | 2 | 110 | 100 | 70 | 2 | 162000 | 0 | 13 | 13 | 1 | 0 | 0.7 | 0 |
| 38 | 4 | 100 | 110 | 80 | 0 | 124000 | 1 | 3TS | 7 | 3 | 1 | 0.6 | 0 |
| 190 | 3 | 100 | 120 | 70 | 4 | 119000 | 1 | 10T | 12 | 2 | 1 | 1.3 | 1 |
| 113.33 | 3 | 121 | 75 | 55 | 4 | 28000 | 3 | 2T | 3 | 4 | 1 | 3.3 | 2 |
| 211 | 2 | 120 | 120 | 65 | 2 | 28000 | 3 | 5TS | 7 | 3 | 1 | 3 | 2 |
| 380.95 | 1 | 92 | 120 | 60 | 2 | 179000 | 0 | 15 | 15 | 0 | 0 | 0.6 | 0 |
| 140 | 2 | 90 | 130 | 70 | 0 | 90000 | 2 | 15 | 15 | 0 | 0 | 0.6 | 0 |
| 277.5 | 2 | 81 | 100 | 60 | 4 | 75000 | 2 | 5T | 7 | 3 | 1 | 0.8 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 410 | 0 | 90 | 110 | 60 | 4 | 98000 | 2 | 12 | 12 | 2 | 0 | 0.4 | 0 |
| 168.33 | 3 | 120 | 130 | 70 | 0 | 110000 | 1 | 8TS | 11 | 2 | 1 | 24 | 4 |
| 296 | 2 | 155 | 125 | 75 | 4 | 6000 | 4 | 7TS=8T | 9 | 3 | 1 | 1.5 | 1 |
| 79 | 2 | 115 | 105 | 60 | 0 | 45000 | 3 | 13 | 13 | 1 | 0 | 7.6 | 3 |
| 342.5 | 1 | 120 | 120 | 65 | 2 | 373000 | 0 | 5TS=7T | 10 | 2 | 1 | 14 | 4 |
| 513.33 | 0 | 105 | 115 | 60 | 4 | 45000 | 3 | 5TS=6T | 9 | 3 | 1 | 1.06 | 0 |
| 248.39 | 2 | 100 | 130 | 65 | 0 | 60000 | 2 | 12 | 12 | 2 | 0 | 0.54 | 0 |
| 70 | 4 | 130 | 110 | 60 | 4 | 270000 | 0 | 3TS | 7 | 3 | 1 | 1.4 | 1 |
| 432 | 0 | 115 | 110 | 65 | 0 | 60000 | 2 | 15 | 15 | 0 | 0 | 39.9 | 4 |
| 280 | 2 | 80 | 110 | 70 | 0 | 66000 | 2 | 2TS | 4 | 4 | 1 | 1.3 | 1 |
| 314.29 | 1 | 95 | 120 | 70 | 0 | 146000 | 1 | 15 | 15 | 0 | 0 | 4.8 | 2 |
| 86 | 4 | 110 | 116 | 64 | 3 | 475000 | 0 | 10TS | 12 | 2 | 1 | 0.4 | 0 |
| 278 | 2 | 94 | 120 | 80 | 0 | 184000 | 0 | 3TS | 5 | 4 | 1 | 0.9 | 0 |
| 77.78 | 4 | 120 | 110 | 70 | 4 | 30000 | 3 | 4T | 6 | 3 | 1 | 3.4 | 2 |
| 515 | 0 | 80 | 122 | 80 | 0 | 30000 | 3 | 15 | 15 | 0 | 0 | 1.8 | 1 |
| 290 | 2 | 130 | 120 | 70 | 4 | 35000 | 3 | 10T | 13 | 1 | 1 | 0.4 | 0 |
| 87.5 | 4 | 95 | 125 | 70 | 4 | 53000 | 2 | 2T | 3 | 4 | 1 | 3 | 2 |
| 66.67 | 4 | 110 | 110 | 60 | 4 | 218000 | 0 | 2TS | 4 | 4 | 1 | 0.5 | 0 |
| 52 | 2 | 105 | 110 | 70 | 4 | 272000 | 0 | 3TS | 6 | 3 | 0 | 1.3 | 1 |
| 323.81 | 1 | 115 | 140 | 80 | 0 | 135000 | 1 | 15 | 15 | 0 | 0 | 15.7 | 4 |
| 386.67 | 1 | 120 | 130 | 70 | 4 | 151000 | 0 | 4TS=5T | 7 | 3 | 1 | 0.4 | 0 |
| 73 | 4 | 120 | 100 | 60 | 4 | 16000 | 4 | 2TS | 4 | 4 | 1 | 2.78 | 2 |
| 240 | 2 | 80 | 120 | 70 | 0 | 148000 | 1 | 2T | 3 | 4 | 1 | 1.9 | 1 |
| 339.29 | 1 | 90 | 150 | 90 | 0 | 324000 | 0 | 15 | 15 | 0 | 0 | 0.4 | 0 |
| 534 | 0 | 120 | 110 | 70 | 3 | 235000 | 0 | 2T | 3 | 4 | 1 | 0.4 | 0 |
| 51 | 4 | 120 | 100 | 60 | 4 | 212000 | 0 | 2TS=4T | 6 | 3 | 1 | 0.7 | 0 |
| 426.67 | 0 | 115 | 122 | 70 | 0 | 327000 | 0 | 10TS | 12 | 2 | 1 | 0.4 | 0 |
| 595.24 | 0 | 80 | 110 | 75 | 0 | 140000 | 1 | 14 | 14 | 1 | 0 | 0.4 | 0 |
| | 1 | 130 | 120 | 60 | 3 | 116000 | 1 | 12 | 12 | 2 | 0 | 2.46 | 2 |
| 233.33 | 2 | 105 | 115 | 70 | 4 | 90000 | 2 | 9T | 12 | 2 | 1 | 2.1 | 2 |
| 195 | 2 | 115 | 130 | 70 | 4 | 208000 | 0 | 15 | 15 | 0 | 0 | 0.72 | 0 |
| 145 | 3 | 106 | 120 | 60 | 3 | 226000 | 0 | 2T | 3 | 4 | 1 | 6.6 | 3 |
| 519.05 | 0 | 130 | 100 | 70 | 0 | 190000 | 0 | 3T | 4 | 4 | 1 | 0.47 | 0 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 85 | 4 | 130 | 100 | 60 | 4 | 73000 | 2 | 6T | 8 | 3 | 1 | 3.2 | 2 |
| 210.71 | 2 | 90 | 110 | 60 | 4 | 145000 | 1 | 2TS | 5 | 4 | 1 | 0.4 | 0 |
| 240 | 2 | 90 | 130 | 60 | 4 | 30000 | 3 | 2TS | 4 | 4 | 1 | 0.67 | 0 |
| 253.33 | 2 | 85 | 115 | 60 | 4 | 261000 | 0 | 2TS | 4 | 4 | 1 | 1.3 | 1 |
| | 2 | 80 | 140 | 75 | 4 | 27000 | 3 | 14 | 14 | 1 | 0 | 2 | 2 |

| creat1 | CREAT1COI | urea1 | sofa1 | intake1 | output1 | RIFLE1 | AKIN1 | sofa2 | intake2 | output2 | creat2 | CREAT2COI | urea2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.5 | 1 | 104 | 5 | 1855 | 1475 | 1 | 1 | 3 | 3465 | 1272 | 1.17 | 0 | 87 |
| 1.9 | 1 | 69 | 11 | 5852 | 2030 | 2 | 2 | 14 | | | 2.61 | 2 | 109 |
| 1.99 | 2 | 34 | 9 | 1926 | 750 | | 1 | 10 | 1398 | 1355 | 2.11 | 2 | 65 |
| 3.6 | 3 | 70 | 13 | 4425 | 735 | 3 | 3 | 13 | 2677 | 365 | 3.78 | 3 | 90 |
| 1.63 | 1 | 73 | 8 | 3534 | 1295 | 2 | 2 | 1 | 2970 | 1330 | 1.15 | 0 | 45 |
| 1.46 | 1 | 31 | 6 | 3250 | 865 | 1 | 1 | 2 | 4075 | 2095 | 1.25 | 1 | 30 |
| 6.06 | 4 | 159 | 17 | 10557 | 1430 | 3 | 3 | 16 | 6980 | 1290 | 3.91 | 3 | 114 |
| 1.12 | 0 | 60 | 12 | 6658 | 1485 | 1 | 1 | 15 | 4475 | 645 | 1.5 | 1 | 90 |
| 1.62 | 1 | 91 | 9 | 3330 | 1820 | | 1 | 10 | 3640 | 1035 | 2.2 | 2 | 110 |
| 1.08 | 0 | 23 | 9 | 3198 | 770 | 1 | 1 | 5 | 3785 | 2880 | 0.95 | 0 | 25 |
| 2.27 | 2 | 107 | 18 | 7958 | 177 | 2 | 3 | 18 | 3997 | 825 | 2.56 | 2 | 112 |
| 1.14 | 0 | 60 | 10 | 4015 | 870 | 1 | 1 | 8 | 3925 | 1060 | 0.8 | 0 | 41 |
| 3.61 | 3 | 155 | 13 | 2010 | 620 | 3 | 3 | 10 | 3960 | 470 | 3.12 | 2 | 102 |
| 1.4 | 1 | 41 | 11 | 4419 | 1575 | 1 | 1 | 14 | 3664 | 685 | 2.79 | 2 | 70 |
| 1.88 | 1 | 78 | 14 | 11853 | 3000 | 2 | 2 | 13 | 5708 | 1680 | 1.54 | 1 | 69 |
| 2.08 | 2 | 119 | 13 | 2640 | 1115 | 1 | 1 | 9 | 2353 | 1455 | 1.86 | 1 | 93 |
| 2.09 | 2 | 71 | 15 | 4322 | 1740 | 3 | 3 | 8 | 1573 | 2525 | 1.92 | 1 | 55 |
| 3.76 | 3 | 154 | 7 | | | 3 | 3 | 7 | | | 4.03 | 3 | 168 |
| 3.33 | 2 | 78 | 16 | 5620 | 1845 | 3 | 3 | 15 | 4602 | 5130 | 2.32 | 2 | 59 |
| 1.41 | 1 | 198 | 15 | 3456 | 2195 | 2 | 2 | 12 | 4775 | 3445 | 1.42 | 1 | 181 |
| 1.75 | 1 | 61 | 10 | 5768 | 360 | 2 | 2 | 11 | 7039 | 1210 | 2.48 | 2 | 63 |
| 1.1 | 0 | 27 | 7 | 4178 | 3360 | 1 | 1 | 13 | 3181 | 1505 | 1.36 | 1 | 28 |
| 3.72 | 3 | 95 | 12 | 967 | 460 | 2 | 2 | 13 | 2590 | 1020 | 3.62 | 3 | 66 |
| 1.6 | 1 | 90 | 12 | 3500 | 1500 | 1 | 1 | 12 | 4043 | 1235 | 1.49 | 1 | 94 |
| 1.01 | 0 | 17 | 15 | 2113 | 757 | 1 | 1 | 13 | 4287 | 442 | 1.43 | 1 | 34 |
| 1.5 | 1 | 28 | 7 | 1632 | 1020 | 1 | 1 | 9 | 3379 | 1153 | 2.63 | 2 | 57 |
| 2.16 | 2 | 33 | 3 | 4060 | 1865 | 2 | 2 | 2 | 1035 | 40 | 3 | 2 | 38 |
| 1.05 | 0 | 46 | 8 | 5395 | 2350 | 1 | 1 | 8 | 4335 | 2647 | 1 | 0 | 40 |
| 1.35 | 1 | 55 | 13 | 4016 | 1720 | 2 | 2 | 9 | 1742 | 1420 | 0.94 | 0 | 38 |
| 2.36 | 2 | 77 | 16 | 4295 | 125 | 3 | 3 | 16 | 1000 | 65 | 2.32 | 2 | 47 |
| 2.09 | 2 | 86 | 3 | 4808 | 2225 | 2 | 2 | 2 | 1775 | 1880 | 0.8 | 0 | 34 |
| 1.69 | 1 | 65 | 11 | 5207 | 1135 | 1 | 1 | 12 | 2480 | 1055 | 1.86 | 1 | 70 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.98 | 3 | 80 | 18 | 8051 | 3475 | 3 | 3 | 18 | 3000 | 1800 | 3.79 | 3 | 88 |
| 1.6 | 1 | 110 | 5 | 2500 | 555 | 2 | 2 | 3 | 5074 | 1145 | 1.09 | 0 | 107 |
| 2.4 | 2 | 68 | 12 | 5732 | 500 | 2 | 2 | 12 | 5034 | 1230 | 3.22 | 2 | 80 |
| 1.28 | 1 | 45 | 3 | 1520 | 1665 | 1 | 1 | 2 | 1850 | 4430 | 0.66 | 0 | 30 |
| 2.1 | 2 | 81 | 8 | 2986 | 1020 | 1 | 1 | 9 | 2688 | 1015 | 2.32 | 2 | 110 |
| 1.55 | 1 | 101 | 3 | 3300 | 880 | 1 | 1 | 2 | 1545 | 1795 | 1.73 | 1 | 114 |
| 1.71 | 1 | 78 | 10 | 1866 | 1290 | 2 | 2 | 10 | 1974 | 1415 | 1.08 | 0 | 66 |
| 2.89 | 2 | 183 | 16 | 6494 | 475 | 3 | 3 | 17 | 4578 | 1050 | 2.99 | 2 | 215 |
| 1.63 | 1 | 50 | 15 | 4715 | 400 | 2 | 2 | 16 | 2480 | 562 | 2.86 | 2 | 75 |
| 1.51 | 1 | 61 | 11 | 3663 | 722 | 2 | 2 | 9 | 3354 | 1110 | 1.27 | 1 | 60 |
| 1.68 | 1 | 54 | 5 | 4620 | 1155 | 2 | 2 | 16 | 3884 | 380 | 1.84 | 1 | 67 |
| 4.54 | 3 | 184 | 16 | 4527 | 690 | 3 | 3 | 17 | 5677 | 890 | 3.86 | 3 | 213 |
| 1.09 | 0 | 61 | 16 | 10000 | 275 | 3 | 3 | 17 | 4502 | 375 | 1.32 | 1 | 50 |
| 2.67 | 2 | 71 | 7 | 6895 | 250 | 3 | 3 | 11 | 1675 | 411 | 3.24 | 2 | 94 |
| 1.92 | 1 | 37 | 11 | 7125 | 365 | 3 | 3 | 20 | 3495 | 102 | 4.97 | 4 | 109 |
| 4.94 | 4 | 116 | 19 | 3450 | 10 | 3 | 3 | 18 | 1516 | 5 | 5.87 | 4 | 106 |
| 3.15 | 2 | 60 | 13 | 3537 | 670 | 3 | 3 | 15 | 1756 | 750 | 2.88 | 2 | 75 |
| 3.28 | 2 | 95 | 8 | 3293 | 850 | 3 | 3 | 11 | 3025 | 720 | 3.88 | 3 | 110 |
| 1.56 | 1 | 77 | 14 | 2181 | 2340 | 1 | 1 | 9 | 1840 | 2470 | 1.34 | 1 | 84 |
| 2.3 | 2 | 120 | 8 | 3060 | 1250 | 3 | 3 | 8 | 2400 | 1170 | 2.43 | 2 | 123 |
| 4.51 | 3 | 121 | 6 | 7785 | 895 | 3 | 3 | 8 | 3845 | 1130 | 5 | 4 | 130 |
| 1 | 0 | 49 | 11 | 1954 | 465 | 1 | 1 | 10 | 2099 | 410 | 1.07 | 0 | 50 |
| 5.36 | 4 | 129 | 10 | 2853 | 2265 | 2 | 2 | 6 | 1094 | 2050 | 5.4 | 4 | 130 |
| 1.25 | 1 | 20 | 2 | 1820 | 205 | 1 | 1 | 0 | 1440 | 785 | 0.99 | 0 | 20 |
| 5.78 | 4 | 145 | 15 | 2566 | 65 | 3 | 3 | 17 | 2218 | 85 | 5.46 | 4 | 125 |
| 1.28 | 1 | 69 | 6 | 2455 | 1125 | 2 | 2 | 7 | 2765 | 1235 | 1.31 | 1 | 70 |
| 2.59 | 2 | 81 | 10 | 1265 | 595 | 2 | 2 | 10 | 1815 | 20 | 2.87 | 2 | 68 |
| 1.06 | 0 | 32 | 11 | 4650 | 3570 | 1 | 1 | 9 | 2067 | 1247 | 0.77 | 0 | 22 |
| 3.12 | 2 | 111 | 18 | 3000 | 400 | 3 | 3 | | | | | | |
| 1.91 | 1 | 68 | 13 | 7337 | 345 | 2 | 2 | 15 | 3450 | 290 | 3.04 | 2 | 91 |
| 1.52 | 1 | 50 | 4 | 5041 | 1698 | 1 | 1 | 0 | 2028 | 2710 | 0.98 | 0 | 31 |
| 5.8 | 4 | 132 | 8 | 1814 | 127 | 3 | 3 | 9 | 1351 | 580 | 5.11 | 4 | 97 |
| 1.53 | 1 | 124 | 12 | 6672 | 1290 | 2 | 2 | 13 | 4168 | 1010 | 1.31 | 1 | 128 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.05 | 2 | 98 | 10 | 7095 | 410 | 2 | 2 | 9 | 3159 | 615 | 2.85 | 2 | 90 |
| 1.1 | 0 | 48 | 10 | 5110 | 2410 | 1 | 1 | 11 | 4599 | 2135 | 1.04 | 0 | 48 |
| 1.3 | 1 | 51 | 15 | 4756 | 1490 | 2 | 2 | 17 | 3957 | 675 | 2.6 | 2 | 85 |
| 1.2 | 0 | 95 | 9 | 5710 | 1575 | 1 | 1 | 18 | 6740 | 2295 | 0.87 | 0 | 77 |
| 1.47 | 1 | 73 | 10 | 3806 | 3395 | 1 | 1 | 8 | 6158 | 2760 | 0.85 | 0 | 90 |
| 1.58 | 1 | 55 | 11 | 3359 | 560 | 1 | 1 | 16 | 4406 | 595 | 1.47 | 1 | 73 |
| 5.45 | 4 | 187 | 10 | 7138 | 1085 | 3 | 3 | 12 | 2042 | 1185 | 5.22 | 4 | 193 |
| 1.52 | 1 | 44 | 13 | 7568 | 1142 | 2 | 2 | 11 | 4391 | 940 | 1.19 | 0 | 44 |
| 2.5 | 2 | 150 | 8 | 2740 | 1340 | 2 | 2 | 16 | 4060 | 750 | 3.34 | 2 | 191 |
| 2.54 | 2 | 143 | 11 | 1856 | 685 | 2 | 2 | 15 | 6125 | 690 | 2.04 | 2 | 133 |
| 1.46 | 1 | 28 | 5 | 7148 | 2225 | 1 | 1 | 7 | 5700 | 3875 | 1.27 | 1 | 31 |
| 1.34 | 1 | 48 | 10 | 1656 | 1465 | 1 | 1 | 6 | 1585 | 965 | 1.27 | 1 | 55 |
| 1.1 | 0 | 25 | 6 | 2813 | 1635 | 1 | 1 | 5 | 2710 | 2399 | 0.75 | 0 | 30 |
| 1.71 | 1 | 85 | 17 | 8932 | 1990 | 2 | 2 | 15 | 2945 | 1350 | 1.72 | 1 | 98 |
| 2.37 | 2 | 78 | 6 | 1220 | 3328 | 3 | 3 | 7 | 1508 | 3595 | 2.02 | 2 | 57 |
| 3.46 | 3 | 179 | 13 | 5938 | 2970 | 3 | 3 | 12 | 4288 | 2633 | 2.3 | 2 | 140 |
| 1.65 | 1 | 56 | 17 | 2720 | 1035 | 2 | 2 | 17 | 2297 | 1150 | 1.84 | 1 | 147 |
| 4.05 | 3 | 94 | 15 | 5864 | 1995 | 3 | 3 | 15 | 3360 | 385 | 3.28 | 2 | 109 |
| 1.84 | 1 | 61 | 11 | 3991 | 790 | 2 | 2 | 15 | 2841 | 390 | 2.67 | 2 | 83 |
| 3.43 | 3 | 82 | 9 | 1250 | 50 | 3 | 3 | 6 | 2830 | 540 | 3.59 | 3 | 90 |
| 2.67 | 2 | 69 | 10 | 3223 | 2675 | 3 | 3 | 9 | 2064 | 1348 | 2.59 | 2 | 90 |
| 1.57 | 1 | 46 | 19 | 9293 | 30 | 3 | 3 | 18 | 5901 | 60 | 1.51 | 1 | 29 |
| 1.38 | 1 | 48 | 9 | 880 | 1205 | 1 | 1 | 8 | 2596 | 1220 | 1.05 | 0 | 56 |
| 1.77 | 1 | 45 | 2 | 8780 | 4850 | 1 | 1 | 1 | 5544 | 2985 | 1.49 | 1 | 43 |
| 1.4 | 1 | 28 | 8 | 7864 | 2575 | 1 | 1 | 7 | 4719 | 2460 | 0.91 | 0 | 40 |
| 2.03 | 2 | 60 | 13 | 4502 | 1305 | 2 | 2 | 11 | 2628 | 1217 | 1.71 | 1 | 67 |
| 1.06 | 0 | 27 | 2 | 2945 | 2825 | 1 | 1 | 2 | 3206 | 2515 | 0.61 | 0 | 30 |
| 1.1 | 0 | 31 | 2 | 4100 | 1625 | 1 | 1 | 3 | 5030 | 1440 | 0.49 | 0 | 30 |
| 1.71 | 1 | 12 | 10 | 2000 | 400 | 2 | 2 | 14 | 1800 | 200 | 3.17 | 2 | 20 |
| 4.82 | 3 | 183 | 15 | 13250 | 2705 | 3 | 3 | 14 | 6203 | 1215 | 2.49 | 2 | 148 |
| 2.36 | 2 | 46 | 8 | 3574 | 1675 | 2 | 2 | 13 | 876 | 130 | 2.02 | 2 | 60 |
| 2.06 | 2 | 59 | 15 | 5066 | 1585 | 3 | 3 | 9 | 3344 | 1950 | 1.57 | 1 | 50 |
| 4.26 | 3 | 103 | 7 | 4120 | 2025 | | 1 | 9 | 3195 | 1040 | 4.58 | 3 | 102 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4.33 | 3 | 70 | 18 | 8307 | 530 | 3 | 3 | 18 | | | 2.98 | 2 | 58 |
| 1.29 | 1 | 45 | 12 | 7585 | 2820 | 1 | 1 | 13 | 4095 | 1690 | 1.5 | 1 | 58 |
| 7.27 | 4 | 149 | 17 | 11724 | 1411 | 3 | 3 | 15 | 2135 | 305 | 5.98 | 4 | 105 |
| 1.58 | 1 | 27 | 12 | 6880 | 760 | 1 | 1 | 12 | 2146 | 290 | 2.3 | 2 | 37 |
| 2.39 | 2 | 104 | 14 | 2480 | 840 | 3 | 3 | 9 | 2700 | 1315 | 1.83 | 1 | 102 |

| PH2 | PCO22 | P2 | NA2 | K2 | CL2 | CA2 | GLU2 | LAC2 | HB2 | BEC2 | HCO32 | F2 | PF2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.53 | 34 | 91 | 147 | 3.3 | 115 | 4.76 | 241 | 1.5 | 6.1 | 5.7 | 28.4 | 21 | 433.33 |
| 7.46 | 28 | 150 | 147 | 2.7 | 115 | 4.08 | 151 | 2.6 | 8.5 | -3.9 | 19.9 | 30 | 500 |
| 7.57 | 16 | 108 | 119 | 3.5 | 90 | 3.94 | 176 | 1.5 | 10 | -7.3 | 14.7 | 45 | 240 |
| 7.42 | 31 | 63 | 134 | 4.5 | 105 | 3.9 | 241 | 4.3 | 12.4 | -4.4 | 20.1 | 25 | 252 |
| 7.4 | 18 | 138 | 146 | 3.1 | 126 | 4.09 | 134 | 1 | 8.8 | -13.7 | 11.1 | 24 | 575 |
| 7.41 | 37 | 79 | 141 | 3 | 108 | 4.54 | 165 | 0.9 | 12.3 | -1.1 | 23.5 | 24 | 329.17 |
| 7.21 | 19 | 131 | 139 | 2.9 | 105 | 3.58 | 81 | 12.3 | 10.7 | -20.3 | 7.6 | 40 | 327.5 |
| 7.43 | 36 | 55 | 146 | 3.6 | 117 | 4.22 | 101 | 3.4 | 6.9 | -0.4 | 23.9 | 50 | 110 |
| 7.01 | 42 | 259 | 150 | 3.5 | 118 | 4.58 | 537 | 3.5 | 10 | -20.5 | 10.6 | 60 | 431.67 |
| 7.38 | 42 | 236 | 134 | 3.5 | 101 | 4.41 | 109 | 1.2 |  | -0.3 | 24.8 | 40 | 590 |
| 7.23 | 31 | 65 | 141 | 4.4 | 103 | 4.12 | 166 | 10.7 | 8.2 | -14.6 | 13 | 100 | 65 |
| 7.41 | 43 | 74 | 144 | 3.4 | 111 | 4.61 | 142 | 1.5 | 15.7 | 2.7 | 27.3 | 30 | 246.67 |
| 7.38 | 30 | 73 | 136 | 3.7 | 110 | 4.51 | 189 | 1.5 | 10.4 | -7.4 | 17.7 | 24 | 304.17 |
| 6.96 | 145 | 76 | 154 | 4 | 117 | 4.81 | 271 | 1.2 | 10.9 | 0.7 | 32.6 | 80 | 95 |
| 7.2 | 34 | 70 | 138 | 3.9 | 108 | 3.92 | 150 | 9.8 | 13.3 | -14.7 | 13.3 | 44 | 159.09 |
| 7.52 | 30 | 100 | 147 | 4.4 | 119 | 4.61 | 145 | 1.5 | 9.5 | 1.6 | 24.5 | 30 | 333.33 |
| 7.36 | 34 | 143 | 147 | 3.8 | 118 | 3.95 | 157 | 1 | 10 | -6.2 | 19.2 | 40 | 357.5 |
| 7.29 | 26 | 67 | 132 | 3 | 123 | 3.96 | 199 | 1.6 | 6.3 | -14.1 | 12.5 | 60 | 111.67 |
| 7.5 | 31 | 73 | 146 | 3.6 | 115 | 3.67 | 198 | 1.8 | 11.8 | 1 | 24.2 | 40 | 182.5 |
| 7.43 | 32 | 88 | 151 | 4 | 123 | 4.81 | 186 | 2 | 12.3 | -3.1 | 21.2 | 75 | 117.33 |
| 7.21 | 33 | 78 | 138 | 4 | 112 | 4.43 | 145 | 3.2 | 7.6 | -10.7 | 13.2 | 28 | 278.57 |
| 7.27 | 42 | 71 | 155 | 5.8 | 114 | 2.5 | 158 | 3 | 12.2 | -7.6 | 19.3 | 100 | 71 |
| 7.41 | 39 | 55 | 137 | 4.3 | 107 | 4.29 | 222 | 1.5 | 9.6 | 0.1 | 24.7 | 40 | 137.5 |
| 7.39 | 52 | 50 | 137 | 2.9 | 102 | 3.92 | 233 | 2.2 | 8.4 | 6.5 | 31.5 | 40 | 125 |
| 7.43 | 28 | 104 | 143 | 3.1 | 110 | 3.91 | 128 | 7.4 | 8.9 | -5.7 | 18.6 | 30 | 346.67 |
| 7.39 | 38 | 74 | 132 | 4.9 | 104 | 4.04 | 86 | 0.8 | 14.7 | -2 | 23 | 70 | 105.71 |
| 7.51 | 30 | 111 | 137 | 3.6 | 105 | 4.05 | 131 | 2.1 | 12.9 | 0.9 | 23.9 | 21 | 528.57 |
| 7.4 | 32 | 70 | 142 | 3.7 | 112 | 4.42 | 109 | 2.6 | 11 | -5 | 19.8 | 21 | 333.33 |
| 7.52 | 30 | 49 | 143 | 3.6 | 114 | 4.32 | 159 | 1.1 | 11.8 | 1.6 | 24.5 | 30 | 163.33 |
| 6.83 | 32 | 56 | 132 | 8.6 | 103 | 3.66 | 593 | 18.7 | 6.6 | -28.7 | 5.3 | 100 | 56 |
| 7.55 | 35 | 59 | 151 | 3.3 | 119 | 4.29 | 246 | 2 | 10.1 | 8.2 | 30.6 | 21 | 280.95 |
| 7.4 | 25 | 105 | 146 | 3.1 | 107 | 4.3 | 173 | 14.8 | 8.4 | -9.3 | 15.5 | 30 | 350 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | 250 |
| 7.45 | 47 | 114 | 162 | 3.1 | 126 | 4.85 | 59 | 2.1 | 10.9 | 8.7 | 32.7 | 30 | 380 |
| 7.46 | 18 | 72 | 141 | 2.9 | 113 | 3.67 | 118 | 3.5 | 14.4 | -11 | 12.8 | 21 | 342.86 |
| 7.39 | 62 | 44 | 139 | 4.1 | 106 | 4.31 | 192 | 1.2 | 11.1 | 12.5 | 37.5 | 30 | 146.67 |
| 7.09 | 70 | 50 | 139 | 4.6 | 108 | 3.5 | 259 | 2.4 | | -8.6 | 21.2 | 30 | 166.67 |
| 7.46 | 33 | 95 | 141 | 4.7 | 115 | 4.36 | 107 | 1.5 | 14.5 | -0.3 | 23.5 | 31 | 306.45 |
| 7.4 | 40 | 265 | 140 | 4.1 | 111 | 3.64 | 168 | 1.6 | 11.1 | 0 | 24.8 | 100 | 265 |
| 7.44 | 30 | 71 | 150 | 4.9 | 119 | 3.61 | 206 | 4.7 | 11.4 | -3.8 | 20.4 | 55 | 129.09 |
| 7.25 | 25 | 117 | 127 | 3.3 | 98 | 3.77 | 276 | 5.7 | 11 | -16.2 | 11 | 40 | 292.5 |
| 7.49 | 28 | 189 | 148 | 3.1 | 116 | 3.94 | 215 | 3.3 | 9.5 | -2 | 21.3 | 50 | 378 |
| 7.57 | 92 | 36 | 179 | 3.8 | 119 | 2.96 | 112 | 8.1 | 8.5 | 62.3 | 84.3 | 70 | 51.43 |
| 7.24 | 48 | 138 | 145 | 3.3 | 117 | 3.34 | 208 | 3.1 | 11.4 | -6.8 | 20.6 | 50 | 276 |
| 7.31 | 26 | 82 | 129 | 3.3 | 102 | 3.81 | 143 | 5.3 | 6.7 | -13.2 | 13.1 | 30 | 273.33 |
| 7.26 | 32.9 | 120 | 131 | 5.5 | 106 | 0.98 | 101 | 4.2 | 6.5 | -4.5 | 19.5 | 100 | 120 |
| 7.42 | 33 | 54 | 144 | 3.2 | 107 | 4.15 | 135 | 9.4 | 14.5 | -3.1 | 21.4 | 80 | 67.5 |
| 7.62 | 38 | 67 | 140 | 3.5 | 99 | 4.11 | 205 | 4.6 | 8 | 17.9 | 39.1 | 40 | 167.5 |
| 7.48 | 35 | 64 | 133 | 3.5 | 101 | 4.08 | 135 | 3.4 | 8.5 | 2.6 | 26.1 | 40 | 160 |
| 7.24 | 37 | 71 | 132 | 3.8 | 100 | 4.51 | 183 | 3.7 | 11 | -11.5 | 15.9 | 24 | 295.83 |
| 7.64 | 23 | 172 | 144 | 3.2 | 116 | 4.29 | 170 | 1.3 | 7.6 | 3.9 | 24.8 | 35 | 491.43 |
| 7.4 | 30 | 80 | 131 | 3.4 | 107 | 3.91 | 101 | 1.3 | 12.2 | -6.2 | 18.6 | 40 | 200 |
| 7.38 | 30 | 70 | 137 | 4.2 | 109 | 4.36 | 126 | 1.5 | 12.5 | -7.4 | 17.7 | 21 | 333.33 |
| 7.36 | 44 | 81 | 143 | 3.6 | 112 | 3.31 | 172 | 1.7 | 9 | -0.5 | 24.9 | 35 | 231.43 |
| | | | | | | | | | | | | | |
| | | 179 | 140 | 4 | | | | | | | | 30 | 596.67 |
| 7.34 | 40 | 82 | 134 | 4 | 104 | 4.04 | 118 | 1.5 | 9.1 | -4.2 | 21.6 | 80 | 102.5 |
| 7.5 | 31.5 | 122 | 144 | 4 | 110 | 4 | 100 | 2 | 8.3 | 1.7 | 26.2 | 60 | 203.33 |
| 7.44 | 31 | 203 | 130 | 4.3 | 103 | 4.32 | 187 | 0.9 | 6.3 | -3.1 | 21.1 | 80 | 253.75 |
| 7.38 | 49 | 67 | 141 | 3.7 | 109 | 4.29 | 134 | 1 | 13.3 | 3.9 | 29 | 30 | 223.33 |
| | | | | | | | | | | | | | |
| 7.43 | 28 | 64 | 142 | 3.9 | 112 | 4.24 | 174 | 4.5 | 7 | -5.7 | 18.6 | 40 | 160 |
| | | | | | | | | | | | | | |
| 7.36 | 42 | 145 | 138 | 4.3 | 107 | 4.6 | 97 | 0.5 | 10 | -1.7 | 23.7 | 60 | 241.67 |
| 7.44 | 34 | 68 | 148 | 3.4 | 115 | 4.63 | 153 | 1.9 | 11.1 | -1.1 | 23.1 | 35 | 194.29 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.27 | 18 | 211 | 136 | 2.9 | 119 | 3.81 | 119 | 3.7 | 14.7 | -18.6 | 8.3 | 31 | 680.65 |
| 7.34 | 29 | 39 | 147 | 4.3 | 121 | 4.35 | 148 | 3.4 | 7.5 | -10.2 | 15.6 | 25 | 156 |
| 7.28 | 36 | 49 | 131 | 4.2 | 104 | 3.54 | 147 | 2.8 | 11.3 | -9.8 | 16.9 | 30 | 163.33 |
| 7.51 | 38 | 46 | 138 | 4.6 | 107 | 3.92 | 139 | 4.4 | 9.4 | 7.3 | 30.3 | 40 | 115 |
| 7.48 | 31 | 103 | 150 | 4 | 121 | 4.71 | 181 | 1.1 | 5.2 | -0.4 | 23.1 | 21 | 490.48 |
| 7.47 | 31 | 103 | 138 | 3.3 | 105 | 4.24 | 146 | 4.8 | 7.3 | -1.1 | 22.6 | 35 | 294.29 |
| 7.47 | 26 | 182 | 130 | 3.7 | 100 | 3.96 | 151 | 3.4 | 12.1 | -4.8 | 18.9 | 30 | 606.67 |
| 7.38 | 29 | 60 | 135 | 3.6 | 110 | 3.97 | 596 | 1.7 |  | -7.9 | 17.2 | 100 | 60 |
| 7.42 | 18 | 205 | 144 | 5.1 | 108 | 3.11 | 101 | 10.7 | 6.7 | -12.8 | 11.7 | 80 | 256.25 |
| 7.36 | 33 | 76 | 140 | 4.3 | 112 | 4.47 | 143 | 1.7 | 8.1 | -6.8 | 18.6 | 30 | 253.33 |
| 7.43 | 42 | 56 | 137 | 3.9 | 104 | 4.08 | 140 | 1.1 | 11.9 | 3.6 | 27.9 | 21 | 266.67 |
| 7.44 | 39 | 69 | 148 | 2.3 | 116 | 4.58 | 116 | 0.9 | 9.4 | 2.3 | 26.5 | 30 | 230 |
| 7.39 | 37 | 90 | 138 | 3.3 | 106 | 4.35 | 169 | 1 | 15.4 | -2.6 | 22.4 | 30 | 300 |
| 7.34 | 33 | 61 | 137 | 3.3 | 105 | 4.36 | 163 | 4.3 | 13.8 | -8 | 17.8 | 30 | 203.33 |
| 7.52 | 32 | 97 | 136 | 4.6 | 103 | 3.15 | 95 | 0.9 | 12.5 | 3.2 | 26.1 | 31 | 312.9 |
| 7.3 | 45 | 144 | 139 | 6.3 | 106 | 4.72 | 135 | 0.6 | 8.1 | -4.3 | 22.1 | 25 | 576 |
| 7.35 | 43 | 62 | 140 | 4.1 | 108 | 3.88 | 116 | 2.1 | 10.1 | -1.9 | 23.7 | 70 | 88.57 |
| 7.45 | 27 | 67 | 148 | 4.1 | 115 | 3.81 | 294 | 3.5 | 10.7 | -5.2 | 18.8 | 60 | 111.67 |
| 7.31 | 62 | 50 | 144 | 3.3 | 109 | 5.03 | 136 | 2 | 7.5 | 4.9 | 31.2 | 85 | 58.82 |
| 7.48 | 24 | 87 | 135 | 3.7 | 110 | 4.14 | 100 | 2.6 | 10.8 | -5.6 | 17.9 | 21 | 414.29 |
| 7.33 | 15 | 133 | 150 | 3.4 | 114 | 3.63 | 265 | 3.1 | 8.8 | -18 | 7.9 | 30 | 443.33 |
| 7.26 | 33 | 64 | 143 | 3 | 107 | 4.24 | 86 | 13.1 | 8.4 | -12.3 | 14.8 | 100 | 64 |
| 7.43 | 37 | 50 | 136 | 4.4 | 102 | 4.48 | 212 | 1.7 | 14 | 0.3 | 24.6 | 30 | 166.67 |
| 7.32 | 32.4 | 248 | 147 | 3.6 | 123 | 1.03 | 309 | 1.9 | 10.4 | -8.5 | 16.4 | 60 | 413.33 |
| 7.28 | 40 | 99 | 136 | 3.8 | 109 | 4.06 | 144 | 2.7 | 16 | -7.9 | 18.8 | 21 | 471.43 |
| 7.52 | 39 | 70 | 144 | 3.4 | 106 | 4.37 | 230 | 2.3 | 14.4 | 8.9 | 31.8 | 80 | 87.5 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.45 | 32 | 103 | 144 | 2.9 | 114 | 3.68 | 106 | 1.3 |  | -1.8 | 22.2 | 21 | 490.48 |
| 7.05 | 26 | 171 | 132 | 4.6 | 104 | 3.68 | 92 | 13.6 | 10.2 | -23.3 | 7.2 |  |  |
| 7.36 | 39 | 86 | 137 | 4.1 | 106 | 4.46 | 211 | 1.5 | 15.3 | -3.4 | 22 | 40 | 215 |
| 7 | 28 | 102 | 139 | 8.6 | 109 | 4.06 | 326 | 17.7 | 9.4 | -24.4 | 6.9 | 75 | 136 |
| 7.58 | 32 | 98 | 141 | 3.1 | 107 | 3.7 | 106 | 2.1 | 7.7 | 8.1 | 30 | 25 | 392 |
| 7.22 | 38 | 47 | 136 | 4.2 | 109 | 4.73 | 305 | 1.2 | 12 | -12.1 | 15.6 | 21 | 223.81 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.1 | 35 | 70 | 145 | 3.8 | 115 | 3.58 | 42 | 13.5 | 7.8 | -18.8 | 10.9 | 60 | 116.67 |
| 6.93 | 36 | 72 | 147 | 2.7 | 114 | 3.29 | 300 | 9.2 | 11.5 | -24.8 | 7.6 | 90 | 80 |
| 7.38 | 25 | 138 | 137 | 5.8 | 104 | 2.72 | 144 | 4.8 | 16.5 | -10.3 | 14.8 | 40 | 345 |
| 7.31 | 43 | 50 | 140 | 4.5 | 108 | 3.77 | 95 | 5.4 | 11.9 | -4.6 | 21.7 | 40 | 125 |
| 7.38 | 38 | 83 | 139 | 3.6 | 111 | 4.18 | 149 | 1.7 | 10.5 | -2.6 | 22.5 | 40 | 207.5 |

| PF2COD | GCS2 | GCS22 | GCS2COD | vent2 | PLATE2 | PLAT2COD | BIL2 | BIL2COD | PR2 | SBP2 | DBP2 | CVS2 | SOFA3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 5T | 7 | 3 | 1 | 180000 | 0 | 0.6 | 0 | 94 | 140 | 90 | 0 | 4 |
| 0 | 5TS=6T | 9 | 3 | 1 | 15000 | 4 | 1.5 | 1 | 145 | 85 | 50 | 4 | 16 |
| 2 | 9T | 12 | 2 | 1 | 336000 | 0 | 0.9 | 0 | 95 | 110 | 65 | 4 | 7 |
| 2 | 4T | 6 | 3 | 1 | 60000 | 2 | 0.9 | 0 | 96 | 110 | 70 | 3 | 14 |
| 0 | 10T | 13 | 1 | 1 | 250000 | 0 | 0.9 | 0 | 90 | 100 | 60 | 0 | 1 |
| 1 | 15 | 15 | 0 | 1 | 167000 | 0 | 0.7 | 0 | 100 | 120 | 74 | 0 | 1 |
| 1 | 2TS=4T | 6 | 3 | 1 | 45000 | 3 | 2.2 | 2 | 126 | 120 | 76 | 4 | 18 |
| 3 | 2T | 3 | 4 | 1 | 30000 | 3 | 0.5 | 0 | 130 | 120 | 70 | 4 | 16 |
| 0 | 2T | 3 | 4 | 1 | 175000 | 0 | 0.7 | 0 | 120 | 120 | 80 | 4 | 12 |
| 0 | 7TS=8T | 11 | 2 | 1 | 241000 | 0 | 0.6 | 0 | 116 | 130 | 80 | 3 | 3 |
| 4 | 2t | 3 | 4 | 1 | 81000 | 2 | 4.8 | 2 | 140 | 120 | 60 | 4 | 20 |
| 2 | 4T | 6 | 3 | 1 | 130000 | 1 | 3.3 | 2 | 75 | 145 | 85 | 0 | 6 |
| 1 | 12 | 12 | 2 | 0 | 117000 | 1 | 0.6 | 0 | 100 | 125 | 65 | 4 | 9 |
| 4 | 2TS=4T | 6 | 3 | 1 | 127000 | 1 | 0.6 | 0 | 120 | 105 | 60 | 4 | 16 |
| 3 | 2TS=4T | 6 | 3 | 1 | 56000 | 2 | 0.58 | 0 | 115 | 120 | 70 | 4 | 13 |
| 1 | 7T | 10 | 2 | 1 | 75000 | 2 | 9.7 | 3 | 95 | 110 | 70 | 0 | 9 |
| 1 | 7T | 10 | 2 | 1 | 197000 | 0 | 0.9 | 0 | 120 | 120 | 65 | 4 | 8 |
| 2 | 15 | 15 | 0 | 0 | 70000 | 2 | 1.1 | 0 | 100 | 130 | 60 | 0 |  |
| 3 | 10T | 13 | 1 | 1 | 45000 | 3 | 2 | 2 | 100 | 120 | 65 | 4 | 8 |
| 3 | 4TS | 7 | 3 | 1 | 50000 | 3 | 3.97 | 2 | 110 | 120 | 80 | 0 | 13 |
| 2 | 15 | 15 | 0 | 0 | 15000 | 4 | 1 | 0 | 145 | 107 | 45 | 3 | 12 |
| 4 | 2T | 3 | 4 | 1 | 200000 | 0 | 0.5 | 0 | 110 | 90 | 50 | 4 |  |
| 3 | 9T | 12 | 2 | 1 | 140000 | 1 | 0.5 | 0 | 110 | 140 | 60 | 4 | 14 |
| 3 | 3T | 4 | 4 | 1 | 200000 | 0 | 0.6 | 0 | 90 | 120 | 70 | 4 | 6 |
| 1 | 5TS=6T | 9 | 3 | 1 | 60000 | 2 | 8 | 3 | 115 | 120 | 75 | 3 | 10 |
| 3 | 7T | 10 | 2 | 1 | 303000 | 0 | 0.4 | 0 | 100 | 130 | 65 | 2 | 8 |
| 0 | 15 | 15 | 0 | 0 | 243000 | 0 | 1.2 | 0 | 72 | 140 | 90 | 0 | 2 |
| 1 | 15 | 15 | 0 | 0 | 64000 | 2 | 2 | 2 | 90 | 100 | 60 | 3 | 5 |
| 3 | 5TS=8T | 12 | 2 | 1 | 170000 | 0 | 2 | 2 | 90 | 140 | 80 | 2 | 8 |
| 4 | 2T | 3 | 4 | 1 | 60000 | 2 | 1.2 | 0 | 90 | 100 | 65 | 4 |  |
| 2 | 15 | 15 | 0 | 0 | 394000 | 0 | 0.5 | 0 | 100 | 150 | 80 | 0 | 1 |
| 1 | 7TS | 9 | 3 | 1 | 60000 | 2 | 1.4 | 1 | 110 | 100 | 65 | 4 | 11 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 2T | 3 | 4 | 1 | 17000 | 4 | 1.8 | 1 | 120 | 90 | 50 | 4 | |
| 1 | 8T | 11 | 2 | 1 | 160000 | 0 | 0.6 | 0 | 130 | 110 | 70 | 0 | 4 |
| 1 | 2T | 3 | 4 | 1 | 100000 | 2 | 0.9 | 0 | 90 | 120 | 70 | 3 | 12 |
| 2 | 15 | 15 | 0 | 0 | 275000 | 0 | 0.6 | 0 | 100 | 140 | 75 | 0 | 1 |
| 3 | 6T | 9 | 3 | 1 | 120000 | 1 | 0.7 | 0 | 120 | 160 | 100 | 0 | 11 |
| 1 | 15 | 15 | 0 | 0 | 200000 | 0 | 0.8 | 0 | 105 | 110 | 70 | 0 | 2 |
| 2 | 6TS | 9 | 3 | 1 | 200000 | 0 | 2.6 | 2 | 70 | 120 | 70 | 3 | 8 |
| 3 | 4TS=5T | 7 | 3 | 1 | 18000 | 4 | 1.8 | 1 | 120 | 100 | 60 | 4 | 18 |
| 2 | 2TS=4T | 6 | 3 | 1 | 30000 | 3 | 2.6 | 2 | 95 | 130 | 70 | 4 | 12 |
| 1 | 6TS | 10 | 2 | 1 | 118000 | 1 | 0.4 | 0 | 100 | 140 | 70 | 4 | 7 |
| 4 | 2TS | 4 | 4 | 1 | 30000 | 3 | 0.9 | 0 | 100 | 110 | 65 | 4 | 18 |
| 2 | 3T | 4 | 4 | 1 | 30000 | 3 | 2 | 2 | 100 | 120 | 70 | 3 | 17 |
| 2 | 10T | 12 | 2 | 1 | 18000 | 4 | 18 | 4 | 70 | 140 | 80 | 4 | 18 |
| 2 | 13 | 13 | 1 | 0 | 100000 | 2 | 1 | 0 | 120 | 120 | 70 | 4 | 14 |
| 4 | 4TS=6T | 9 | 3 | 1 | 36000 | 3 | 4 | 2 | 135 | 100 | 60 | 4 | 18 |
| 3 | 5TS=6T | 9 | 3 | 1 | 46000 | 3 | 2 | 2 | 80 | 130 | 75 | 3 | 15 |
| 2 | 15 | 15 | 0 | 0 | 17000 | 4 | 6 | 3 | 120 | 110 | 70 | 4 | 14 |
| 2 | 15 | 15 | 0 | 0 | 43000 | 3 | 0.9 | 0 | 110 | 115 | 60 | 3 | 6 |
| 0 | 4T | 6 | 3 | 1 | 120000 | 1 | 3.5 | 2 | 120 | 130 | 80 | 2 | 8 |
| 2 | 15 | 15 | 0 | 0 | 133000 | 1 | 4.3 | 2 | 96 | 90 | 45 | 1 | 6 |
| 1 | 15 | 15 | 0 | 0 | 110000 | 1 | 2 | 2 | 110 | 135 | 70 | 0 | 7 |
| 2 | 9TS=9T | 12 | 2 | 1 | 106000 | 1 | 1.9 | 1 | 95 | 100 | 60 | 4 | 9 |
| 1 | 10T | 14 | 1 | 1 | 150000 | 1 | 0.5 | 0 | 90 | 130 | 80 | 0 | |
| 0 | 15 | 15 | 0 | 0 | 200000 | 0 | 0.8 | 0 | 60 | 170 | 80 | 0 | 0 |
| 3 | 7T | 10 | 2 | 1 | 30000 | 3 | 7 | 3 | 100 | 110 | 60 | 2 | 12 |
| 2 | 12 | 12 | 2 | 0 | 153000 | 0 | 0.7 | 0 | 100 | 120 | 75 | 2 | 7 |
| 2 | 7T | 10 | 2 | 1 | 120000 | 1 | 0.7 | 0 | 70 | 120 | 70 | 3 | 7 |
| 2 | 10T | 12 | 2 | 1 | 88000 | 2 | 1.1 | 0 | 100 | 140 | 80 | 3 | 11 |
| | | | | | | | | | | | | | |
| 3 | 3TS | 6 | 3 | 1 | 34000 | 3 | 5.9 | 2 | 105 | 135 | 60 | 2 | 15 |
| 0 | 15 | 15 | 0 | 0 | 207000 | 0 | 0.6 | 0 | 90 | 130 | 74 | 0 | 0 |
| 2 | 15 | 15 | 0 | 0 | 90000 | 2 | 1.5 | 1 | 90 | 130 | 70 | 0 | 10 |
| 3 | 5T | 7 | 3 | 1 | 46000 | 3 | 0.4 | 0 | 90 | 100 | 60 | 3 | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 13 | 13 | 1 | 0 | 70000 | 2 | 0.5 | 0 | 90 | 110 | 80 | 4 | 9 |
| 3 | 8TS | 12 | 2 | 1 | 90000 | 2 | 25 | 4 | 120 | 120 | 70 | 0 | 20 |
| 3 | 9TS=9T | 12 | 2 | 1 | 4000 | 4 | 2.7 | 2 | 135 | 120 | 75 | 4 | 17 |
| 3 | 2TS=3 | 4 | 4 | 1 | 16000 | 4 | 7.7 | 3 | 115 | 120 | 70 | 4 | 18 |
| 0 | 7T | 9 | 3 | 1 | 121000 | 1 | 12 | 4 | 125 | 115 | 60 | 0 | 12 |
| 2 | 4TS=6T | 9 | 3 | 1 | 10000 | 4 | 3 | 2 | 125 | 100 | 50 | 4 | 16 |
| 0 | 3T | 4 | 4 | 1 | 15000 | 4 | 0.5 | 0 | 110 | 130 | 70 | 0 | 12 |
| 4 | 9T | 11 | 2 | 1 | 247000 | 0 | 1.7 | 1 | 95 | 120 | 75 | 4 | 6 |
| 2 | 7TS=9T | 12 | 2 | 1 | 62000 | 2 | 34 | 4 | 110 | 110 | 65 | 4 | 18 |
| 2 | 2T | 4 | 4 | 1 | 45000 | 3 | 1.4 | 1 | 100 | 130 | 60 | 3 | 12 |
| 2 | 15 | 15 | 0 | 0 | 78000 | 2 | 2.5 | 2 | 80 | 135 | 80 | 0 | 4 |
| 2 | 10T | 13 | 1 | 1 | 382000 | 0 | 0.4 | 0 | 110 | 120 | 70 | 2 | 3 |
| 1 | 3T | 6 | 3 | 1 | 135000 | 1 | 0.8 | 0 | 110 | 130 | 90 | 0 | 7 |
| 2 | 4TS=5T | 7 | 3 | 1 | 30000 | 3 | 3 | 2 | 90 | 110 | 65 | 4 | 14 |
| 1 | 15 | 15 | 0 | 0 | 45000 | 3 | 1.7 | 1 | 90 | 150 | 100 | 0 | 6 |
| 0 | 8TS | 12 | 2 | 1 | 15000 | 4 | 0.6 | 0 | 133 | 105 | 50 | 4 | 9 |
| 4 | 2TS | 3 | 4 | 1 | 45000 | 3 | 4 | 2 | 85 | 100 | 70 | 3 | 15 |
| 3 | 2TS | 4 | 4 | 1 | 95000 | 2 | 0.5 | 0 | 105 | 120 | 75 | 4 | 13 |
| 4 | 3T | 4 | 4 | 1 | 200000 | 0 | 1.5 | 1 | 100 | 115 | 65 | 4 | |
| 0 | 15 | 15 | 0 | 0 | 162000 | 0 | 11.4 | 3 | 118 | 130 | 80 | 0 | 8 |
| 0 | 5TS | 7 | 3 | 1 | 163000 | 0 | 0.5 | 0 | 110 | 120 | 65 | 4 | 10 |
| 4 | 3TS | 6 | 3 | 1 | 16000 | 4 | 3.5 | 2 | 115 | 100 | 60 | 4 | 13 |
| 3 | 6T | 9 | 3 | 1 | 130000 | 1 | 1.7 | 1 | 80 | 125 | 75 | 0 | 5 |
| 0 | 15 | 15 | 0 | 0 | 319000 | 0 | 0.6 | 0 | 73 | 130 | 90 | 0 | 2 |
| 0 | 2T | 3 | 4 | 1 | 264000 | 0 | 0.2 | 0 | 130 | 120 | 70 | 3 | 8 |
| 4 | 7TS=8T | 11 | 2 | 1 | 166000 | 0 | 0.7 | 0 | 125 | 110 | 70 | 4 | 13 |
| 0 | 12 | 12 | 2 | 0 | 210000 | 0 | 0.5 | 0 | 90 | 120 | 70 | 0 | 0 |
| 0 | 13 | 13 | 1 | 0 | 90000 | 2 | 0.3 | 0 | 70 | 105 | 70 | 0 | 1 |
| 1 | 2T | 3 | 4 | 1 | 80000 | 2 | 3.5 | 2 | 140 | 120 | 55 | 3 | 20 |
| 2 | 5TS=6T | 9 | 3 | 1 | 110000 | 1 | 2.1 | 2 | 90 | 105 | 60 | 4 | 14 |
| 3 | 2TS | 4 | 4 | 1 | 208000 | 0 | 0.8 | 0 | 80 | 120 | 60 | 4 | |
| 1 | 2T | 3 | 4 | 1 | 212000 | 0 | 7 | 3 | 100 | 124 | 75 | 0 | 9 |
| 2 | 2T | 3 | 4 | 1 | 232000 | 0 | 0.4 | 0 | 84 | 116 | 72 | 0 | 6 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 2T | 3 | 4 | 1 | 42000 | 3 | 3.5 | 2 | 120 | 50 | 30 | 4 | |
| 4 | 2T | 3 | 4 | 1 | 211000 | 0 | 0.6 | 0 | 120 | 90 | 50 | 4 | |
| 1 | 2T | 3 | 4 | 1 | 60000 | 2 | 0.6 | 0 | 120 | 100 | 70 | 4 | 15 |
| 3 | 3TS | 6 | 3 | 1 | 200000 | 0 | 0.8 | 0 | 90 | 120 | 60 | 4 | |
| 2 | 15 | 15 | 0 | 0 | 27000 | 3 | 1.2 | 0 | 85 | 105 | 70 | 3 | 8 |

| intake3 | output3 | creat3 | CREAT3CO | urea3 | PH3 | PCO23 | P3 | NA3 | K3 | CL3 | CA3 | GLU3 | LAC3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2732 | 1355 | 1.42 | 1 | 72 | 7.52 | 36 | 157 | 136 | 3.4 | 107 | 4.54 | 252 | 1.6 |
| | | 2.9 | 2 | 120 | 7.24 | 30 | 172 | 147 | 3 | 117 | 3.54 | 146 | 6.2 |
| 1145 | 865 | 2.33 | 2 | 75 | 7.28 | 30 | 91 | 132 | 4.4 | 98 | 4.16 | 255 | 2 |
| 2355 | 325 | 3.71 | 3 | 119 | 7.37 | 38.4 | 130 | 134 | 4.1 | 106 | 4.07 | | 1.4 |
| 2970 | 1330 | 0.88 | 0 | 22 | 7.41 | 19 | 94 | 142 | 3.7 | 119 | 4.29 | 122 | 0.7 |
| 3000 | 2000 | 0.89 | 0 | 19 | | | 80 | | | | | | |
| 2604 | 1325 | 4.07 | 3 | 138 | 7.46 | 36 | 78 | 145 | 3.2 | 110 | 5.68 | 200 | 3 |
| 2929 | 810 | 1.71 | 1 | 110 | 7.38 | 35 | 53 | 136 | 4 | 108 | 3.94 | 142 | 2.7 |
| 2207 | 980 | 3.34 | 2 | 157 | 7.34 | 31 | 166 | 147 | 5.2 | 120 | 3.86 | 346 | 1.5 |
| 3640 | 1975 | 0.83 | 0 | 25 | 7.57 | 20 | 76 | 135 | 2.8 | 103 | 4.19 | 126 | 1.1 |
| 4340 | 700 | 5.1 | 4 | 144 | 7.24 | 31 | 61 | 142 | 4.9 | 104 | 4.02 | 109 | 12.8 |
| 2490 | 1295 | 0.62 | 0 | 32 | 7.46 | 41 | 95 | 138 | 3.7 | 105 | 4.42 | 160 | 0.7 |
| 1591 | 1155 | 2.57 | 2 | 101 | 7.37 | 31 | 58 | 135 | 4.7 | 108 | 4.44 | 115 | 1.8 |
| 5528 | 160 | 4.05 | 3 | 95 | 7 | 85 | 44 | 144 | 3.3 | 106 | 4.57 | 149 | 3.7 |
| 4577 | 1280 | 1.23 | 0 | 55 | 7.47 | 31 | 90 | 143 | 3.8 | 105 | 3.68 | 238 | 9.2 |
| 2947 | 1585 | 1.74 | 1 | 85 | 7.51 | 29 | 64 | 138 | 5 | 113 | 4.53 | 161 | 1.2 |
| 1195 | 1680 | 1.53 | 1 | 50 | 7.43 | 31 | 91 | 154 | 3.7 | 124 | 4.23 | 186 | 0.9 |
| | | 4.61 | 3 | 194 | 7.37 | 22 | 147 | 140 | 4.2 | 117 | 4 | 140 | 1.8 |
| 4507 | 4160 | 1.34 | 1 | 41 | 7.47 | 32 | 55 | 141 | 3.1 | 112 | 3.98 | 90 | 1.3 |
| 6590 | 5340 | 1.02 | 0 | 140 | 7.43 | 45 | 157 | 148 | 3.6 | 115 | 4.44 | 169 | 1.7 |
| 4498 | 830 | 3.1 | 2 | 75 | 7.11 | 23 | 86 | 142 | 4.2 | 108 | 4.13 | 159 | 13 |
| | | | | | | | | | | | | | |
| 1849 | 1335 | 5.06 | 4 | 88 | 7.29 | 34 | 73 | 131 | 5.9 | 100 | 4.88 | 402 | 3.9 |
| 2364 | 1385 | 1.2 | 0 | 79 | 7.51 | 39 | 85 | 138 | 4 | 105 | 4.21 | 173 | 1.9 |
| 2532 | 1080 | 1.58 | 1 | 42 | 7.5 | 24 | 90 | 139 | 3.3 | 110 | 3.84 | 91 | 6.5 |
| 3178 | 1345 | 3.06 | 2 | 68 | 7.37 | 38 | 96 | 138 | 3.9 | 110 | 4.09 | 100 | 0.5 |
| 1385 | 120 | 3.3 | 2 | 40 | | | | | | | | | |
| 3500 | 2000 | 0.6 | 0 | 30 | 7.46 | 33 | 72 | 139 | 3.2 | 110 | 4.68 | 130 | 1.2 |
| 2200 | 940 | 0.82 | 0 | 41 | 7.51 | 33 | 62 | 140 | 3.5 | 111 | 4.21 | 138 | 1 |
| | | | | | | | | | | | | | |
| 2825 | 2450 | 0.78 | 0 | 40 | | | | | | | | | |
| 3340 | 1035 | 1.86 | 1 | 80 | 7.47 | 34 | 185 | 139 | 3.6 | 108 | 4.29 | 100 | 3.4 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4003 | 1355 | 0.69 | 0 | 63 | | | | | | | | | |
| 5392 | 1125 | 3.78 | 3 | 95 | 7.52 | 19 | 104 | 148 | 3.7 | 117 | 3.8 | 120 | 5.1 |
| 2100 | 1740 | 0.65 | 0 | 30 | 7.38 | 44 | 76 | 149 | 4.8 | 118 | 4.56 | 207 | 1.7 |
| 1550 | 1250 | 2.5 | 2 | 120 | 6.87 | 99 | 68 | 131 | 5.3 | 104 | 3.52 | 96 | 4.7 |
| 1520 | 1670 | 1.03 | 0 | 71 | 7.45 | 35 | 69 | 139 | 4.4 | 108 | 4.13 | 98 | 1.4 |
| 1885 | 1630 | 0.82 | 0 | 71 | 7.39 | 49 | 89 | 147 | 4.2 | 115 | 4.18 | 161 | 1.2 |
| 2037 | 2340 | 2.18 | 2 | 228 | 7.47 | 32 | 57 | 148 | 4.4 | 119 | 3.73 | 220 | 2.9 |
| 2475 | 940 | 3.41 | 2 | 112 | 7.34 | 25 | 78 | 132 | 4.6 | 102 | 3.76 | 279 | 2.2 |
| 3992 | 607 | 0.98 | 0 | 79 | 7.48 | 33 | 71 | 151 | 2.7 | 119 | 4.19 | 152 | 1.4 |
| 3140 | 145 | 2.5 | 2 | 80 | 7.1 | 39 | 94 | 138 | 4.6 | 111 | 4.24 | 114 | 11.7 |
| 2451 | 1100 | 4.01 | 3 | 237 | 7.36 | 36 | 79 | 142 | 3.3 | 112 | 3.23 | 159 | 1.8 |
| 3282 | 765 | 1.5 | 1 | 60 | 7.1 | 41 | 89 | 131 | 4.3 | 99 | 3.87 | 168 | 10.6 |
| 2660 | 785 | 3.02 | 2 | 82 | 7.28 | 51 | 72 | 139 | 3.8 | 110 | 4.28 | 118 | 3.4 |
| 2022 | 30 | 4.83 | 3 | 128 | 7.37 | 43 | 86 | 140 | 4.2 | 103 | 3.83 | 170 | 4.4 |
| 1008 | 60 | 8.24 | 4 | 149 | 7.43 | 32 | 52 | 134 | 3.6 | 104 | 4.24 | 95 | 0.9 |
| 1878 | 740 | 2.7 | 2 | 93 | 7.43 | 42 | 39 | 138 | 3.2 | 105 | 4.26 | 215 | 2.4 |
| 1962 | 1985 | 4.21 | 3 | 139 | 7.34 | 34 | 104 | 133 | 3.3 | 101 | 4.55 | 208 | 2.2 |
| 1270 | 3110 | 1.14 | 0 | 61 | 7.52 | 32 | 73 | 144 | 4.1 | 113 | 4.17 | 316 | 1.3 |
| 2321 | 2880 | 1.92 | 1 | 118 | 7.41 | 34 | 76 | 135 | 3.8 | 107 | 4.16 | 92 | 1.1 |
| 1540 | 1025 | 6.89 | 4 | 161 | 7.39 | 28 | 79 | 132 | 4.1 | 106 | 4.2 | 124 | 0.9 |
| 1761 | 580 | 1.01 | 0 | 53 | 7.38 | 41 | 88 | 142 | 3.8 | 113 | 3.38 | 191 | 1.8 |
| 1150 | 1100 | | | | | | | | | | | | |
| 1260 | 765 | 0.96 | 0 | 16 | 7.5 | 41 | 145 | 138 | 2.6 | 104 | 3.8 | 144 | 1 |
| 1350 | 130 | 7.2 | 4 | 240 | 7.35 | 36 | 86 | 135 | 3.6 | 104 | 4.41 | 97 | 0.7 |
| 2450 | 1100 | 1.47 | 1 | 83 | 7.46 | 34 | 145 | 145 | 3.9 | 114 | 3.99 | 80 | 2.1 |
| 2090 | 204 | 3.55 | 3 | 84 | 7.41 | 27 | 100 | 128 | 4.1 | 101 | 4.14 | 146 | 2 |
| 4076 | 742 | 0.83 | 0 | 22 | 6.99 | 136 | 249 | 142 | 3.5 | 109 | 4.37 | 197 | 0.7 |
| | | | | | | | | | | | | | |
| 3230 | 250 | 3.24 | 2 | 100 | 7.44 | 21 | 86 | 144 | 2.1 | 123 | 5.11 | 76 | 1.5 |
| 3000 | 3950 | 0.9 | 0 | 30 | | | | | | | | | |
| 1210 | 280 | 5.88 | 4 | 120 | 7.4 | 35 | 123 | 136 | 4.3 | 108 | 4.4 | 80 | 0.7 |
| 5164 | 892 | 1.29 | | 128 | 7.43 | 33 | 101 | 145 | 3.4 | 112 | 4.62 | 195 | 3.4 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2378 | 350 | 2.76 | 2 | 109 | 7.41 | 22 | 105 | 144 | 2.8 | 114 | 2.77 | 125 | 3.6 |
| 3659 | 2070 | 0.77 | 0 | 35 | 7.38 | 31 | 70 | 148 | 4.2 | 123 | 4.49 | 146 | 1.7 |
| 2700 | 2590 | 3.6 | 3 | 150 | 7.41 | 31 | 285 | 135 | 3.4 | 105 | 3.34 | 161 | 2.6 |
| 4197 | 1095 | 0.99 | 0 | 94 | 7.51 | 38 | 46 | 138 | 4.6 | 107 | 3.92 | 139 | 4.4 |
| 5699 | 3120 | 0.84 | 0 | 82 | 7.42 | 34 | 46 | 146 | 3.7 | 114 | 4.21 | 310 | 3.7 |
| 2163 | 260 | 2.14 | 2 | 88 | 7.37 | 20 | 93 | 140 | 3.9 | 102 | 4.15 | 130 | 16.8 |
| 3490 | 3050 | 5.58 | 4 | 230 | 7.53 | 25 | 79 | 139 | 4.5 | 112 | 4.08 | 147 | 2 |
| 2158 | 2765 | 1.35 | 1 | 45 | 7.45 | 31 | 89 | 141 | 3 | 108 | 4.9 | 112 | 1.8 |
| 5559 | 310 | 3.54 | 3 | 180 | 7.36 | 22 | 192 | 145 | 5 | 112 | 3.01 | 207 | 10.2 |
| 3525 | 1060 | 1.73 | 1 | 119 | 7.39 | 27 | 79 | 146 | 4.4 | 120 | 4.56 | 161 | 1.8 |
| 3190 | 2575 | 1.1 | 0 | 26 | | | | | | | | | |
| 1782 | 878 | 1.02 | 0 | 58 | 7.42 | 40 | 147 | 147 | 3.7 | 119 | 4.56 | 103 | 1.5 |
| 3432 | 2580 | 0.74 | 0 | 35 | 7.48 | 22 | 54 | 130 | 7 | 112 | 3.93 | 183 | 2.3 |
| 2921 | 1765 | 1.17 | 0 | 67 | 7.38 | 40 | 73 | 140 | 4 | 115 | 4.21 | 106 | 1.3 |
| 1728 | 1987 | 2.06 | 2 | 47 | 7.51 | 32 | 110 | 136 | 3.9 | 105 | 3.3 | 126 | 1.2 |
| 3513 | 3204 | 1.43 | 1 | 64 | 7.45 | 42 | 189 | 137 | 4 | 106 | 4.44 | 149 | 0.7 |
| 1954 | 1455 | 1.57 | 1 | 130 | 7.35 | 45 | 89 | 141 | 4.4 | 109 | 4.22 | 124 | 1.7 |
| 2039 | 585 | 1.81 | 1 | 68 | 7.53 | 27 | 83 | 139 | 3.7 | 108 | 4.32 | 206 | 2.2 |
| 2655 | 170 | | | | 7.31 | 50 | 46 | 146 | 3.2 | 113 | 4.42 | 124 | 1.9 |
| 2405 | 850 | 1.62 | 1 | 78 | 7.45 | 28 | 50 | 135 | 3.4 | 107 | 4.37 | 66 | 2.4 |
| 4257 | 1348 | 1.98 | 2 | 91 | 7.3 | 30 | 143 | 139 | 4 | 109 | 3.73 | 287 | 5.7 |
| 2810 | 10 | 2.82 | 2 | 57 | 7.42 | 33 | 149 | 138 | 3.4 | 103 | 3.75 | 158 | 6.5 |
| 3046 | 2530 | 1.09 | 0 | 43 | 7.44 | 39 | 113 | 136 | 4.2 | 102 | 4.87 | 208 | 1.3 |
| 5319 | 3105 | 1.39 | 1 | 33 | 7.41 | 26 | 89 | 146 | 3.1 | 117 | 3.97 | 131 | 2.7 |
| 3919 | 1405 | 0.43 | 0 | 21 | 7.41 | 33 | 84 | 131 | 4.8 | 103 | 3.96 | 140 | 2 |
| 2847 | 2320 | 1.92 | 1 | 73 | 7.5 | 41 | 60 | 146 | 3.3 | 109 | 4.39 | 239 | 2.4 |
| 2950 | 1500 | 0.5 | 0 | 26 | | | | | | | | | |
| 2170 | 1798 | 0.43 | 0 | 25 | | | | | | | | | |
| 3411 | 20 | 3.5 | 3 | 20 | 7.15 | 41 | 72 | 137 | 4.5 | 105 | 4.71 | 47 | 13.3 |
| 8068 | 1730 | 1.97 | 2 | 148 | 7.34 | 42 | 108 | 144 | 3.9 | 113 | 4.05 | 192 | 1.1 |
| | | | | | | | | | | | | | |
| 3450 | 2080 | 1.39 | 1 | 46 | 7.57 | 28 | 78 | 139 | 3.9 | 104 | 4.01 | 109 | 2 |
| 4157 | 865 | 4.04 | 3 | 106 | 7.4 | 32 | 129 | 152 | 3.3 | 124 | 4.76 | 193 | 1.6 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
| 2631 | 90 | 7.76 | 4 | 131 | 7.35 | 30 | 98 | 134 | 5.7 | 98 | 3.27 | 160 | 6.3 |
| | | | | | | | | | | | | | |
| 3061 | 1275 | 1.4 | 1 | 76 | | | | | | | | | |

| HB3 | BEC3 | HCO33 | F3 | PF3 | PF3COD | GCS3 | GCS33 | GCS3COD | vent3 | PLATE3 | PLAT3COD | BIL3 | BIL3COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7.6 | 6.5 | 29.4 | 30 | 523.33 | 0 | 6T | 9 | 3 | 1 | 180000 | 0 | 0.6 | 0 |
| 8.9 | -14.5 | 12.9 | 100 | 172 | 3 | 6TS=7T | 10 | 2 | 1 | 8000 | 4 | 1.5 | 1 |
| 8.6 | -12.6 | 14.1 | 30 | 303.33 | 1 | 15 | 15 | 0 | 0 | 250000 | 0 | 0.8 | 0 |
| 8.4 | -2.8 | 22.1 | 50 | 260 | 2 | 2T | 3 | 4 | 1 | 75000 | 2 | 0.9 | 0 |
| 10.5 | -12.6 | 12 | 21 | 447.62 | 0 | 10T | 14 | 1 | 1 | 200000 | 0 | 0.8 | 0 |
|  |  |  | 24 | 333.33 | 1 | 15 | 15 | 0 | 0 | 200000 | 0 | 0.9 | 0 |
| 7.7 | 1.8 | 25.6 | 35 | 222.86 | 2 | 2T | 3 | 4 | 1 | 29000 | 3 | 2.7 | 2 |
| 7.8 | -4.4 | 20.7 | 40 | 132.5 | 3 | 2T | 3 | 4 | 1 | 19000 | 4 | 0.7 | 0 |
| 9.4 | -9.1 | 16.7 | 30 | 553.33 | 0 | 2T | 3 | 4 | 1 | 75000 | 2 | 0.8 | 0 |
| 14.6 | -3.7 | 18.3 | 30 | 253.33 | 2 | 10T | 13 | 1 | 1 | 200000 | 0 | 0.6 | 0 |
| 16 | -14.1 | 13.3 | 100 | 61 | 4 | 2TS=2T | 3 | 4 | 1 | 70000 | 2 | 4.8 | 2 |
| 15 | 5.4 | 29.2 | 30 | 316.67 | 1 | 10T | 12 | 2 | 1 | 118000 | 1 | 2.5 | 2 |
| 10.6 | -7.4 | 17.9 | 21 | 276.19 | 2 | 14 | 14 | 1 | 0 | 120000 | 1 | 0.7 | 0 |
| 11.5 | -10.3 | 21 | 100 | 44 | 4 | 2T | 3 | 4 | 1 | 110000 | 1 | 0.8 | 0 |
| 11.1 | -1.1 | 22.6 | 50 | 180 | 3 | 2TS=4T | 6 | 3 | 1 | 30000 | 3 | 0.6 | 0 |
| 10.3 | 0.1 | 23.1 | 30 | 213.33 | 2 | 7TS=9T | 12 | 2 | 1 | 107000 | 1 | 11.4 | 3 |
| 8.8 | -3.7 | 20.6 | 30 | 303.33 | 1 | 6T | 9 | 3 | 1 | 185000 | 0 | 0.5 | 0 |
| 7.2 | -12.6 | 12.7 | 40 | 367.5 |  |  |  |  |  | 60000 | 2 | 1.1 | 0 |
| 11.6 | -0.4 | 23.3 | 21 | 261.9 | 2 | 10T | 13 | 1 | 1 | 45000 | 3 | 1.8 | 1 |
| 8.8 | 5.6 | 29.9 | 100 | 157 | 3 | 6TS | 9 | 3 | 1 | 4000 | 4 | 6 | 3 |
| 5.9 | -22.2 | 7.3 | 40 | 215 | 2 | 15 | 15 | 0 | 0 | 11000 | 4 | 1 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10.4 | -10.3 | 16.3 | 100 | 73 | 4 | 8T | 12 | 2 | 1 | 131000 | 1 | 0.5 | 0 |
| 8.5 | 8.1 | 31.1 | 30 | 283.33 | 2 | 6TS=7T | 10 | 2 | 1 | 243000 | 0 | 0.7 | 0 |
| 7.2 | -4.5 | 18.7 | 25 | 360 | 1 | 7T | 10 | 2 | 1 | 44000 | 3 | 9.5 | 3 |
| 10.3 | -3.3 | 22 | 40 | 240 | 2 | 2TS=3T | 4 | 4 | 1 | 335000 | 0 | 0.4 | 0 |
|  |  |  |  |  | 0 | 15 | 15 | 0 | 0 | 240000 | 0 | 0.9 | 0 |
| 11.7 | -0.3 | 23.5 | 21 | 342.86 | 1 | 15 | 15 | 0 | 0 | 60000 | 2 | 1.2 | 0 |
| 12.2 | 3.3 | 26.3 | 35 | 177.14 | 3 | 3T | 4 | 4 | 1 | 166000 | 0 | 1.5 | 1 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | 1 | 15 | 15 | 0 | 0 | 355000 | 0 | 0.7 | 0 |
| 9.8 | 1 | 24.7 | 30 | 616.67 | 0 | 10TS | 12 | 2 | 1 | 45000 | 3 | 1.65 | 1 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1 | 7T | 11 | 2 | 1 | 150000 | 1 | 0.7 | 0 |
| 10.8 | -7.4 | 15.5 | 30 | 346.67 | 1 | 2TS | 4 | 4 | 1 | 130000 | 1 | 1.4 | 1 |
| 11.4 | 0.9 | 26 | 21 | 361.9 | 1 | 15 | 15 | 0 | 0 | 220000 | 0 | 0.6 | 0 |
| | -15.3 | 18.1 | 100 | 68 | 4 | 2T | 3 | 4 | 1 | 120000 | 1 | 0.5 | 0 |
| 14.8 | 0.3 | 24.3 | 31 | 222.58 | 2 | 15 | 15 | 0 | 0 | 180000 | 0 | 0.8 | 0 |
| 8.3 | 4.7 | 29.7 | 35 | 254.29 | 2 | 10TS | 12 | 2 | 1 | 250000 | 0 | 2.3 | 2 |
| 10.6 | -0.4 | 23.3 | 40 | 142.5 | 3 | 5T | 7 | 3 | 1 | 11000 | 4 | 2.8 | 2 |
| 10 | -12.3 | 13.5 | 21 | 371.43 | 1 | 7T | 10 | 2 | 1 | 30000 | 3 | 2.9 | 2 |
| 9.3 | 1.1 | 24.6 | 30 | 236.67 | 2 | 8T | 11 | 2 | 1 | 107000 | 1 | 0.5 | 0 |
| 9.8 | -17.6 | 12.1 | 100 | 94 | 4 | 2TS | 4 | 4 | 1 | 30000 | 3 | 1.3 | 1 |
| 11.6 | -5.1 | 20.3 | 30 | 263.33 | 2 | 3T | 4 | 4 | 1 | 30000 | 3 | 2.4 | 2 |
| 6.3 | -17 | 12.7 | 50 | 178 | 3 | 2T | 3 | 4 | 1 | 75000 | 2 | 17 | 4 |
| 5.1 | -2.7 | 24 | 30 | 240 | 2 | 2T | 3 | 4 | 1 | 60000 | 2 | 1 | 0 |
| 11.1 | -0.4 | 24.9 | 75 | 114.67 | 3 | 2TS=4T | 6 | 3 | 1 | 30000 | 3 | 5 | 2 |
| 7 | -3.1 | 21.2 | 21 | 247.62 | 2 | 7TS | 10 | 2 | 1 | 30000 | 3 | 1.8 | 1 |
| 8.2 | 3.6 | 27.9 | 31 | 125.81 | 2 | 15 | 15 | 0 | 0 | 20000 | 4 | 7 | 3 |
| 11.9 | -7.5 | 18.3 | 31 | 335.48 | 1 | 15 | 15 | 0 | 0 | 60000 | 2 | 0.8 | 0 |
| 8.1 | 3.2 | 26.1 | 35 | 208.57 | 2 | 5T | 7 | 3 | 1 | 110000 | 1 | 3 | 2 |
| 12 | -3 | 21.6 | 60 | 126.67 | 2 | 15 | 15 | 0 | 0 | 119000 | 1 | 3 | 2 |
| 12 | -8.1 | 16.9 | 21 | 376.19 | 1 | 15 | 15 | 0 | 0 | 110000 | 1 | 1.7 | 1 |
| 8.4 | -0.8 | 24.3 | 30 | 293.33 | 2 | 9T | 12 | 2 | 1 | 110000 | 1 | 1.8 | 1 |
| | | | | | 0 | 15 | 15 | 0 | 0 | 153000 | 0 | 0.4 | 0 |
| 9.9 | 8.8 | 32 | 30 | 483.33 | 0 | 15 | 15 | 0 | 0 | 200000 | 0 | 0.8 | 0 |
| 8.9 | -5.7 | 19.9 | 35 | 245.71 | 2 | 8T | 11 | 2 | 1 | 30000 | 3 | 1.5 | 1 |
| 8.9 | 0.4 | 24.2 | 50 | 290 | 2 | 12 | 12 | 2 | 0 | 155000 | 0 | 0.7 | 0 |
| 8 | -7.5 | 17.1 | 30 | 333.33 | 1 | 10T | 12 | 2 | 1 | 120000 | 1 | 0.9 | 0 |
| 12.8 | 1.4 | 32.8 | 100 | 249 | 2 | 2T | 3 | 4 | 1 | 108000 | 1 | 1 | 0 |
| | | | | | | | | | | | | | |
| 10 | -9.9 | 14.3 | 30 | 286.67 | 2 | 3TS | 5 | 4 | 1 | 55000 | 2 | 6.5 | 3 |
| | | | | | 0 | 15 | 15 | 0 | 0 | 200000 | 0 | 0.6 | 0 |
| 9.5 | -3.1 | 21.7 | 60 | 205 | 2 | 15 | 15 | 0 | 0 | 45000 | 3 | 1.6 | 1 |
| 7.5 | -2.4 | 21.9 | 40 | 252.5 | 2 | 9T | 12 | 2 | 1 | 90000 | 2 | 0.4 | 0 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13.8 | -10.7 | 13.9 | 24 | 437.5 | 0 | 13 | 13 | 1 | 0 | 60000 | 2 | 0.7 | 0 |
| 7.8 | -6.8 | 18.3 | 25 | 280 | 2 | 10T | 13 | 13 | 1 | 120000 | 1 | 25 | 4 |
| 10.2 | -5 | 19.6 | 100 | 285 | 2 | 2TS=4T | 6 | 3 | 1 | 8000 | 4 | 3 | 2 |
| 9.4 | 7.3 | 30.3 | 40 | 115 | 3 | 3T | 4 | 4 | 1 | 7000 | 4 | 7.9 | 3 |
| 5.6 | -2.4 | 22.1 | 30 | 153.33 | 3 | 5T | 7 | 3 | 1 | 105000 | 1 | 11 | 3 |
| 7.2 | -13.7 | 11.6 | 28 | 332.14 | 1 | 4TS=6T | 9 | 3 | 1 | 15000 | 4 | 4 | 2 |
| 12.1 | -1.8 | 20.9 | 25 | 316 | 1 | 3T | 4 | 4 | 1 | 45000 | 3 | 0.44 | 0 |
| 12.2 | -2.5 | 21.5 | 30 | 296.67 | 2 | 10T | 13 | 1 | 1 | 267000 | 0 | 1.8 | 1 |
| 7 | -13 | 12.4 | 50 | 384 | 1 | 3T | 4 | 4 | 1 | 60000 | 2 | 34 | 4 |
| 6.8 | -8.7 | 16.3 | 21 | 376.19 | 1 | 3T | 4 | 4 | 1 | 60000 | 2 | 1.4 | 1 |
| | | | | | 1 | 15 | 15 | 0 | 0 | 90000 | 2 | 1.4 | 1 |
| 10.2 | 1.4 | 25.9 | 25 | 588 | 0 | 9TS | 13 | 1 | 1 | 300000 | 0 | 0.6 | 0 |
| 14.3 | -7.1 | 16.4 | 30 | 180 | 3 | 4T | 7 | 3 | 1 | 140000 | 1 | 0.7 | 0 |
| 11.3 | -1.4 | 23.7 | 40 | 182.5 | 3 | 4TS=5T | 7 | 3 | 1 | 26000 | 3 | 2.5 | 2 |
| 9.7 | 2.5 | 25.5 | 24 | 458.33 | 0 | 15 | 15 | 0 | 0 | 35000 | 3 | 1.5 | 1 |
| 8 | 5.2 | 29.2 | 25 | 756 | 0 | 9TS | 13 | 1 | 1 | 30000 | 3 | 0.6 | 0 |
| 10.3 | -0.8 | 24.8 | 50 | 178 | 3 | 2TS | 4 | 4 | 1 | 30000 | 3 | 4.1 | 2 |
| 9.7 | -0.1 | 22.6 | 80 | 103.75 | 3 | 5T | 7 | 3 | 1 | 90000 | 2 | 0.5 | 0 |
| 8.5 | -1.1 | 25.2 | 100 | 46 | 4 | 6T | 9 | 3 | 1 | 108000 | 1 | 2 | 2 |
| 11.1 | -4.5 | 19.5 | 21 | 238.1 | 2 | 15 | 15 | 0 | 0 | 90000 | 2 | 11 | 3 |
| 9.6 | -11.6 | 14.8 | 25 | 572 | 0 | 5T | 7 | 3 | 1 | 150000 | 1 | 0.5 | 0 |
| 8.3 | -3.1 | 21.4 | 70 | 212.86 | 2 | 3TS=5 | 7 | 3 | 1 | 58000 | 2 | 5.9 | 2 |
| 13 | 2.3 | 26.5 | 30 | 376.67 | 1 | 7T | 10 | 2 | 1 | 128000 | 1 | 1.5 | 1 |
| 9.8 | -8.1 | 16.5 | 28 | 317.86 | 1 | 15 | 15 | 0 | 0 | 280000 | 0 | 0.6 | 0 |
| 15.5 | -3.7 | 20.9 | 21 | 400 | 0 | 3T | 4 | 4 | 1 | 194000 | 0 | 0.4 | 0 |
| 14.3 | 8.8 | 32 | 50 | 120 | 3 | 4T | 6 | 3 | 1 | 132000 | 1 | 1.4 | 1 |
| | | | | | 0 | 15 | 15 | 0 | 0 | 180000 | 0 | 0.6 | 0 |
| | | | | | 0 | 15 | 15 | 0 | 0 | 110000 | 1 | 0.3 | 0 |
| 7.8 | -14.6 | 14.3 | 100 | 72 | 4 | 2T | 3 | 4 | 1 | 25000 | 3 | 3.5 | 2 |
| 8 | -3.1 | 22.7 | 100 | 108 | 3 | 6TS=8T | 11 | 2 | 1 | 105000 | 1 | 2.7 | 2 |
| | | | | | | | | | | | | | |
| 7.9 | 3.7 | 25.7 | 21 | 371.43 | 1 | 2T | 3 | 4 | 1 | 200000 | 0 | 8 | 3 |
| 10 | -5 | 19.8 | 25 | 516 | 0 | 4T | 6 | 3 | 1 | 220000 | 0 | 0.4 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
| 15.4 | -9 | 16.6 | 40 | 245 | 2 | 3T | 4 | 4 | 1 | 60000 | 2 | 0.8 | 0 |
| | | | | | | | | | | | | | |
| | | | | | 2 | 15 | 15 | 0 | 0 | 25000 | 3 | 1.2 | 0 |

| PR3 | SBP3 | DBP3 | CVS3 | sofa4 | intake4 | output4 | creat4 | CREAT4CO | urea4 | PH4 | PCO24 | P4 | NA4 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 110 | 70 | 0 | 7 | 2138 | 1595 | 1.26 | 1 | 61 | 7.35 | 50 | 40 | 139 |
| 150 | 80 | 50 | 4 | | | | | | | | | | |
| 110 | 110 | 70 | 4 | 7 | 1323 | 885 | 2.76 | 2 | 87 | 7.5 | 28 | 101 | 139 |
| 90 | 110 | 70 | 3 | 12 | 1875 | 500 | 4.84 | 3 | 155 | 7.33 | 41.1 | 61.7 | 133 |
| 90 | 110 | 70 | 0 | 1 | 2200 | 2145 | 0.73 | 0 | 15 | 7.36 | 20 | 113 | 142 |
| 100 | 130 | 80 | 0 | 1 | 2075 | 1200 | 0.8 | 0 | 20 | | | 80 | |
| 130 | 130 | 80 | 4 | 13 | 3516 | 995 | 4.09 | 3 | 159 | 7.48 | 34 | 107 | 143 |
| 110 | 130 | 80 | 4 | 12 | 2222 | 935 | 1.95 | 1 | 119 | 7.32 | 35 | 65 | 129 |
| 100 | 130 | 70 | 4 | 15 | 1482 | 1280 | 3.7 | 3 | 170 | | | | |
| 96 | 140 | 80 | 0 | 1 | 2310 | 2120 | 0.58 | 0 | 30 | 7.38 | 33 | 93 | 134 |
| 140 | 100 | 70 | 4 | | 200 | 100 | | | | | | | |
| 85 | 130 | 80 | 0 | 9 | 2250 | 2405 | 0.64 | 0 | 40 | 7.37 | 58 | 66 | 138 |
| 110 | 120 | 60 | 3 | 8 | 2161 | 1090 | 2.06 | 2 | 89 | 7.42 | 26 | 84 | 132 |
| 120 | 110 | 65 | 4 | 18 | 1732 | 20 | 5.5 | 4 | 90 | 7.08 | 70 | 29 | 140 |
| 120 | 120 | 75 | 4 | 15 | 5275 | 2025 | 0.92 | 0 | 71 | 7.49 | 24 | 51 | 140 |
| 90 | 120 | 80 | 0 | 6 | 1830 | 1950 | 1.76 | 1 | 1.62 | 76 | 34 | 168 | 138 |
| 110 | 120 | 70 | 3 | 9 | 1811 | 1215 | 1.47 | 1 | 45 | 7.47 | 27 | 50 | 147 |
| 90 | 120 | 70 | 0 | 9 | 3610 | 565 | 5.6 | 4 | 217 | 7.22 | 21 | 185 | 138 |
| 105 | 130 | 80 | 0 | 7 | 4120 | 3265 | 0.95 | 0 | 25 | 7.5 | 26 | 82 | 138 |
| 120 | 130 | 80 | 0 | 15 | 4735 | 2835 | 0.89 | 0 | 135 | 7.32 | 63 | 75 | 147 |
| 150 | 120 | 43 | 4 | 17 | 7223 | 175 | 4.1 | 3 | 91 | 7.26 | | 67 | 141 |
| | | | | | | | | | | | | | |
| 110 | 110 | 65 | 3 | 10 | 1284 | 2580 | 6.27 | 4 | 116 | 7.42 | 32 | 65 | 133 |
| 85 | 130 | 70 | 2 | 4 | 2913 | 3745 | 0.89 | 0 | 59 | 7.54 | 38 | 72 | 133 |
| 120 | 120 | 70 | 0 | 11 | 2923 | 1895 | 1.87 | 1 | 51 | 7.5 | 27 | 77 | 141 |
| 100 | 130 | 70 | 0 | 8 | 1960 | 1283 | 3 | 2 | 85 | 7.31 | 39 | 83 | 138 |
| 80 | 150 | 90 | 0 | 3 | 1350 | 65 | 4.5 | 3 | 60 | | | | |
| 80 | 100 | 70 | 2 | 3 | 3000 | 1800 | 0.67 | 0 | 28 | | | 72 | |
| 100 | 140 | 80 | 0 | 7 | 2000 | 1155 | 0.67 | 0 | 35 | 7.5 | 33 | 79 | 140 |
| | | | | | | | | | | | | | |
| 110 | 150 | 80 | 0 | 1 | 1045 | 1300 | 0.65 | 0 | 35 | | | | |
| 110 | 100 | 60 | 4 | 13 | 3710 | 1155 | 1.76 | 1 | 85 | 7.48 | 33 | 98 | 138 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | 110 | 70 | 0 | 2 | 1535 | 1540 | 0.6 | 0 | 60 | | | | |
| 90 | 120 | 70 | 2 | 10 | 1000 | 300 | 3.98 | 3 | 100 | 7.45 | 28 | 89 | 147 |
| 100 | 140 | 90 | 0 | 0 | 1288 | 1750 | 0.66 | 0 | 29 | 7.38 | 48 | 114 | 153 |
| 140 | 100 | 50 | 0 | | | | | | | | | | |
| 100 | 120 | 80 | 0 | 2 | 1790 | 1550 | 0.97 | 0 | 50 | | | | |
| 86 | 120 | 60 | 2 | 4 | 1700 | 1895 | 0.65 | 0 | 55 | 7.52 | 34 | 77 | 140 |
| 104 | 110 | 70 | 4 | 15 | 2950 | 6580 | 1.5 | 1 | 195 | 7.52 | 34 | 52 | 153 |
| 90 | 115 | 75 | 2 | 13 | 1930 | 2225 | 3.82 | 3 | 126 | 7.29 | 35 | 99 | 133 |
| 90 | 120 | 70 | 2 | 7 | 3062 | 2261 | 1.09 | 0 | 86 | 7.44 | 40 | 24 | 150 |
| 125 | 110 | 65 | 4 | 19 | 1200 | 75 | 3 | 2 | 90 | 7.15 | 49 | 61 | 146 |
| 90 | 130 | 70 | 3 | 15 | 2155 | 1910 | 4.22 | 3 | 268 | 7.36 | 40 | 79 | 145 |
| 70 | 120 | 80 | 4 | 16 | 4365 | 20 | 1.51 | 1 | 52 | 7.29 | 32 | 137 | 133 |
| 100 | 120 | 70 | 4 | 15 | 1507 | 440 | 3.59 | 3 | 111 | 7.37 | 42 | 85 | 141 |
| 130 | 100 | 55 | 4 | 19 | 1639 | 15 | 5.84 | 4 | 161 | 7.42 | 36 | 139 | 135 |
| 90 | 135 | 70 | 3 | 14 | 1440 | 30 | 8.5 | 4 | 155 | 7.43 | 37 | 93 | 140 |
| 110 | 110 | 80 | 3 | 14 | 2346 | 1900 | 2.64 | 2 | 119 | 7.44 | 38 | 67 | 142 |
| 106 | 120 | 66 | 0 | 5 | 2568 | 3525 | 3.36 | 2 | 134 | 7.44 | 36 | 73 | 135 |
| 120 | 120 | 70 | 0 | 9 | 2690 | 2175 | 1.1 | 0 | 56 | | | 80 | |
| 100 | 120 | 70 | 0 | 4 | 2732 | 5136 | 1.53 | 1 | 104 | 7.42 | 36.6 | 61.7 | 134 |
| 95 | 140 | 80 | 0 | 7 | 1520 | 1975 | 8.23 | 4 | 137 | | | | |
| 90 | 100 | 72 | 3 | | 1684 | 1495 | 1.09 | 0 | 48 | 7.27 | 50 | 66 | 147 |
| 90 | 130 | 70 | 0 | 4 | 1500 | 3250 | 5.8 | 4 | 133 | 7.41 | 35 | 154 | 131 |
| 60 | 110 | 70 | 0 | 0 | 800 | 600 | 0.9 | 0 | 20 | | | | |
| 100 | 125 | 70 | 0 | 8 | 1258 | 230 | 4.9 | 3 | 150 | 7.41 | 39 | 124 | 132 |
| 105 | 110 | 70 | 2 | 9 | 2566 | 910 | 1.55 | 1 | 85 | 7.44 | 33 | 77 | 145 |
| 50 | 150 | 80 | 0 | 5 | 1651 | 320 | 2.45 | 2 | 56 | 7.4 | 29 | 88 | 127 |
| 100 | 140 | 80 | 4 | 5 | 4525 | 2225 | 0.7 | 0 | 20 | 7.45 | 39 | 62 | 134 |
| | | | | | | | | | | | | | |
| 120 | 110 | 70 | 2 | 14 | 2500 | 200 | 3.11 | 2 | 58 | 7.47 | 32 | 76 | 133 |
| 92 | 120 | 70 | 0 | 0 | 2950 | 3400 | 0.85 | 0 | 28 | | | | |
| 100 | 160 | 100 | 0 | 9 | 2600 | 235 | 5.78 | 4 | 134 | | | | |
| 90 | 100 | 60 | 0 | 7 | 2622 | 1295 | 1.27 | 1 | 119 | 7.48 | 28 | 78 | 143 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 80 | 110 | 60 | 4 | 13 | 3473 | 195 | 3.19 | 2 | 123 | 7.31 | 23 | 111 | 140 |
| 120 | 120 | 70 | 0 | | 3483 | 1290 | 0.85 | 0 | 28 | 7.33 | 37 | 45 | 148 |
| 120 | 90 | 60 | 3 | 20 | | | 4.48 | 3 | 186 | 7.11 | 45 | 61 | 143 |
| 120 | 120 | 70 | 4 | 16 | 5616 | 1233 | 1.22 | 0 | 111 | 7.52 | 38 | 55 | 144 |
| 120 | 120 | 60 | 2 | 9 | 3642 | 3270 | 0.55 | 0 | 68 | 7.45 | 38 | 41 | 142 |
| 130 | 115 | 55 | 4 | 17 | 3570 | 295 | 2.14 | 2 | 88 | 7.45 | 31 | 85 | 141 |
| 100 | 130 | 80 | 0 | 10 | 4710 | 2400 | 5.39 | 4 | 234 | 7.47 | 27 | 169 | 141 |
| 105 | 125 | 75 | 1 | 3 | 1410 | 2395 | 1.2 | 0 | 40 | 7.48 | 31 | 101 | 143 |
| 120 | 110 | 65 | 4 | 19 | 500 | 50 | 3.8 | 3 | 190 | 6.79 | 23.3 | 95.2 | 143 |
| 110 | 135 | 80 | 3 | 9 | 1791 | 3715 | 1.9 | 1 | 125 | 7.44 | 29 | 89 | 142 |
| 80 | 140 | 70 | 0 | 2 | 1200 | 1150 | 0.83 | 0 | 26 | | | | |
| 110 | 140 | 70 | 2 | 4 | 2065 | 2355 | 0.98 | 0 | 41 | 7.43 | 43 | 139 | 140 |
| 120 | 120 | 90 | 0 | 4 | 2765 | 2125 | 0.74 | 0 | 38 | 7.45 | 30 | 172 | 137 |
| 70 | 110 | 60 | 3 | 11 | 3402 | 2555 | 1.12 | 0 | 42 | 7.49 | 33 | 57 | 138 |
| 95 | 119 | 85 | 0 | 4 | 2402 | 1909 | 1.75 | 1 | 45 | 7.51 | 27 | 119 | 138 |
| 116 | 130 | 77 | 4 | 7 | 4687 | 3330 | 1.27 | 1 | 49 | 7.36 | 40 | 87 | 133 |
| 85 | 120 | 70 | 2 | 12 | 2417 | 2085 | 1.29 | 1 | 160 | 7.53 | 31 | 113 | 146 |
| 105 | 130 | 65 | 4 | 10 | 1329 | 830 | 1.4 | 1 | 80 | 7.51 | 30 | 76 | 143 |
| 95 | 100 | 65 | 3 | 16 | 2087 | 60 | 4.2 | 3 | 124 | 7.37 | 46 | 49 | 142 |
| 130 | 150 | 90 | 0 | 7 | 1980 | 1140 | 1.45 | 1 | 70 | | | | |
| 104 | 100 | 60 | 4 | 8 | 3353 | 910 | 1.39 | 1 | 76 | 7.42 | 31 | 108 | 136 |
| 110 | 125 | 75 | 2 | 20 | 1210 | 5 | 3 | 2 | 65 | 7.25 | 30 | 55 | 134 |
| 90 | 130 | 80 | 0 | 5 | 2680 | 2085 | 1 | 0 | 40 | 7.45 | 37 | 98 | 135 |
| 80 | 140 | 80 | 0 | 3 | 4354 | 3955 | 1.01 | 0 | 29 | 7.5 | 26 | 79 | 141 |
| 130 | 110 | 70 | 4 | 8 | 3033 | 2240 | 0.97 | 0 | 32 | 7.5 | 29 | 91 | 131 |
| 120 | 120 | 75 | 4 | 9 | 2161 | 2885 | 1.68 | 1 | 89 | 7.47 | 46 | 77 | 148 |
| 100 | 120 | 80 | 0 | 0 | 1750 | 2050 | 0.44 | 0 | 25 | | | | |
| 70 | 110 | 70 | 0 | 2 | 1275 | 4845 | 0.45 | 0 | 30 | | | | |
| 150 | 130 | 55 | 4 | 19 | 250 | 5 | 2.68 | 2 | 18 | 7.13 | 29 | 40 | 135 |
| 85 | 120 | 70 | 4 | 17 | 4609 | 1425 | 2.1 | 2 | 138 | 7.21 | 44 | 72 | 145 |
| | | | | | | | | | | | | | |
| 95 | 130 | 80 | 0 | 8 | 2664 | 3030 | 1.33 | 1 | 42 | 7.57 | 27 | 89 | 136 |
| 90 | 110 | 70 | 0 | 10 | 4428 | 595 | 4.15 | 3 | 123 | 7.32 | 34.5 | 76.5 | 151 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
| 90 | 110 | 70 | 3 | 11 | 2150 | 126 | 7 | 4 | 123 | 7.46 | 33 | 129 | 129 |
| | | | | | | | | | | | | | |
| 90 | 100 | 65 | 2 | 6 | 1250 | 800 | 0.99 | 0 | 74 | | | | |

| K4 | CL4 | CA4 | GLU4 | LAC4 | HB4 | BEC4 | HCO34 | F4 | PF4 | PF4COD | GCS4 | GCS44 | GCS4COD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.8 | 106 | 4.56 | 227 | 1.4 | 9 | 2 | 27.6 | 25 | 160 | 3 | 6T | 9 | 3 |
| | | | | | | | | | | | | | |
| 3.9 | 105 | 4.12 | 102 | 1.6 | 8 | -1.4 | 21.8 | 31 | 325.81 | 1 | 15 | 15 | 0 |
| 4.6 | 107 | 1.08 | | 1.3 | 9.1 | -4.2 | 20.8 | 50 | 123.4 | 3 | 5T | 7 | 3 |
| 3.7 | 122 | 4.49 | 119 | 0.6 | 10.2 | -14.1 | 11.3 | 31 | 364.52 | 1 | 15 | 15 | 0 |
| | | | | | | | | 25 | 320 | 1 | 15 | 15 | 0 |
| 3.7 | 111 | 4.84 | 168 | 1.7 | 6.9 | 1.8 | 25.3 | 25 | 428 | 0 | 4T | 6 | 3 |
| 4.7 | 96 | 3.88 | 136 | 3.8 | 20.6 | -8.1 | 18 | 30 | 216.67 | 2 | 2T | 3 | 4 |
| | | | | | | | | | | | 2T | 3 | 4 |
| 3.5 | 104 | 4.58 | 101 | 0.8 | 14.6 | -5.6 | 19.5 | 21 | 442.86 | 0 | 10T | 13 | 1 |
| | | | | | | | | | | | 2T | 3 | 4 |
| 3.4 | 101 | 4.59 | 195 | 1.2 | 16.4 | 8.2 | 33.5 | 80 | 82.5 | 4 | 6TS=8T | 12 | 2 |
| 4.7 | 109 | 4.21 | 163 | 1.9 | 9.9 | -7.6 | 16.9 | 40 | 210 | 2 | 14 | 14 | 1 |
| 4 | 105 | 4.33 | 56 | 4 | 11.2 | -9.2 | 20.8 | 40 | 72.5 | 4 | 2T | 3 | 4 |
| 3.9 | 109 | 3.36 | 108 | 12.1 | 8.1 | -5 | 18.3 | 100 | 51 | 4 | 2TS=3T | 4 | 4 |
| 4.7 | 111 | 4.87 | 161 | 0.9 | 10 | -2.4 | 22.1 | 40 | 420 | 0 | 7TS=9T | 12 | 2 |
| 3.8 | 121 | 4.23 | 180 | 1.6 | 9.3 | -4 | 19.7 | 50 | 100 | 3 | 6T | 9 | 3 |
| 4.4 | 111 | 3.76 | 131 | 4.7 | 9.6 | -19.1 | 8.6 | 40 | 462.5 | 0 | 4T | 6 | 3 |
| 3.4 | 108 | 3.96 | 147 | 1.2 | 12.3 | -2.9 | 20.3 | 30 | 273.33 | 2 | 10T | 13 | 1 |
| 3.3 | 115 | 4.46 | 148 | 1.2 | 8.2 | 6.4 | 32.5 | 100 | 75 | 4 | 2TS | 3 | 4 |
| 4.3 | 105 | 3.89 | 159 | 14.7 | 7.9 | -14.5 | 12.6 | 30 | 223.33 | 2 | 2T | 3 | 4 |
| | | | | | | | | | | | | | |
| 4.4 | 101 | 4.37 | 180 | 1.3 | 10.4 | -3.7 | 20.8 | 24 | 270.83 | 2 | 10T | 14 | 1 |
| 3.6 | 97 | 4.2 | 291 | 1.7 | 8.6 | 10 | 32.5 | 30 | 240 | 2 | 9T | 12 | 2 |
| 2.5 | 107 | 4.18 | 149 | 4 | | -2.1 | 21.1 | 21 | 366.67 | 1 | 7T | 10 | 2 |
| 4.6 | 109 | 4.33 | 142 | 0.6 | 10.2 | -6.7 | 19.6 | 30 | 276.67 | 2 | 2T | 3 | 4 |
| | | | | | | | | | | 0 | 15 | 15 | 0 |
| | | | | | | | | 21 | 342.86 | 1 | 15 | 15 | 0 |
| 3 | 110 | 4.04 | 143 | 0.7 | 10.7 | 2.5 | 25.7 | 30 | 263.33 | 2 | 5T | 7 | 3 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | 1 | 15 | 15 | 0 |
| 3.4 | 107 | 4.1 | 132 | 3 | 7.2 | 1.1 | 24.6 | 40 | 245 | 2 | 10T | 12 | 2 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | 0 | 8T | 12 | 2 |
| 4.1 | 114 | 4 | 183 | 2.1 | 11.4 | -4.5 | 19.5 | 28 | 317.86 | 1 | 5T | 7 | 3 |
| 3.8 | 121 | 4.74 | 154 | 0.8 | 11.2 | 3.3 | 28.4 | 21 | 542.86 | 0 | 15 | 15 | 0 |
| | | | | | | | | | | | | | |
| | | | | | 14 | | | | | 2 | 15 | 15 | 0 |
| 3.9 | 109 | 3.98 | 185 | 1 | 7.9 | 4.9 | 27.8 | 21 | 366.67 | 1 | 10T | 14 | 1 |
| 4 | 121 | 4.22 | 159 | 1.6 | 10.4 | 4.9 | 27.8 | 35 | 148.57 | 3 | 5T | 7 | 3 |
| 4.4 | 100 | 4 | 79 | 1.3 | 11 | -9.8 | 16.8 | 31 | 319.35 | 1 | 9T | 12 | 2 |
| 3.3 | 117 | 4.27 | 191 | 1.8 | 9.6 | 3 | 27.2 | 30 | 80 | 4 | 8T | 12 | 2 |
| 4.3 | 113 | 4.63 | 112 | 11.5 | 8.7 | -11.8 | 17.1 | 90 | 67.78 | 4 | 2T | 4 | 4 |
| 3.7 | 113 | 4.63 | 123 | 1 | 8.8 | -2.8 | 22.6 | 30 | 263.33 | 2 | 5T | 7 | 3 |
| 3.5 | 98 | 5.48 | 137 | 9.3 | 8.3 | -11.2 | 15.4 | 30 | 456.67 | 0 | 2T | 3 | 4 |
| 4 | 110 | 4.33 | 94 | 3.1 | 6.1 | -1 | 24.3 | 30 | 283.33 | 2 | 8T | 11 | 2 |
| 3.9 | 103 | 3.39 | 201 | 3 | 10.8 | -1.1 | 23.4 | 70 | 198.57 | 3 | 2TS=4T | 6 | 3 |
| 3.4 | 107 | 4.49 | 115 | 1 | 6.4 | 0.3 | 24.6 | 25 | 372 | 1 | 8TS | 12 | 2 |
| 3 | 113 | 4.39 | 169 | 2.2 | 8 | 1.6 | 25.8 | 31 | 216.13 | 2 | 15 | 15 | 0 |
| 3.4 | 106 | 4.61 | 214 | 1.2 | 10.3 | 0.3 | 24.5 | 21 | 347.62 | 1 | 15 | 15 | 0 |
| | | | | | | | | 35 | 228.57 | 2 | 5T | 7 | 3 |
| 3.5 | 107 | 1.07 | | 2 | 11.6 | -0.4 | 23.5 | 24 | 257.08 | 2 | 15 | 15 | 0 |
| | | | | | 11.6 | | | | | 0 | 15 | 15 | 0 |
| 3.3 | 117 | 3.55 | 181 | 2.1 | 9.9 | -3.9 | 23 | 35 | 188.57 | 3 | 9T | 12 | 2 |
| 3.5 | 101 | 3.79 | 140 | 0.6 | 9 | -2.4 | 22.2 | 24 | 641.67 | 0 | 15 | 15 | 0 |
| | | | | | 10 | | | | | 0 | 15 | 15 | 0 |
| 4.5 | 102 | 6.99 | 91 | 1 | 9.2 | 0.1 | 24.7 | 35 | 354.29 | 1 | 15 | 15 | 0 |
| 4.2 | 114 | 4.33 | 85 | 2.8 | 8.7 | -1.8 | 22.4 | 60 | 128.33 | 2 | 11 | 11 | 2 |
| 3.6 | 105 | 4.24 | 142 | 0.5 | 9.1 | -6.8 | 18 | 21 | 419.05 | 0 | 10T | 12 | 2 |
| 3.2 | 98 | 4.17 | 69 | 2.2 | 14.1 | 3.1 | 27.1 | 30 | 206.67 | 2 | 10T | 13 | 1 |
| | | | | | | | | | | | | | |
| 3.5 | 101 | 3.64 | 210 | 3.2 | 9.5 | -0.4 | 23.3 | 30 | 253.33 | 2 | 3TS | 6 | 3 |
| | | | | | | | | | | 0 | 15 | 15 | 0 |
| | | | | | | | | | | 1 | 15 | 15 | 0 |
| 3.2 | 110 | 4.42 | 202 | 3.2 | 9.5 | -2.6 | 20.9 | 30 | 260 | 2 | 9T | 12 | 2 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3.6 | 110 | 2.8 | 227 | 4.9 | 15 | -14.7 | 11.6 | 35 | 317.14 | 1 | 2T | 3 | 4 |
| 3.9 | 122 | 4.65 | 146 | 2.2 | 7.2 | -6.4 | 19.5 | 24 | 187.5 | 2 | 13 | 13 | |
| 5.3 | 106 | 3.71 | 25 | 12.4 | 6 | -15.2 | 14.3 | 95 | 64.21 | 4 | 4T | 6 | 3 |
| 4.3 | 110 | 4.33 | 110 | 3.4 | 7.6 | 8.1 | 31 | 50 | 110 | 3 | 5T | 7 | 3 |
| 3.9 | 117 | 4.35 | 170 | 1.4 | 5.7 | 2.4 | 26.4 | 31 | 132.26 | 3 | 10T | 13 | 1 |
| 4.2 | 105 | 3.96 | 92 | 11.9 | 7.7 | -2.5 | 21.5 | 30 | 283.33 | 2 | 5TS=7T | 10 | 2 |
| 3.4 | 111 | 4.23 | 198 | 2.5 | 10 | -4 | 19.7 | 25 | 676 | 0 | 4T | 6 | 3 |
| 3.3 | 110 | 4.87 | 106 | 1.5 | 11.9 | -0.4 | 23.1 | 40 | 252.5 | 2 | 15 | 15 | 0 |
| 6.7 | 118 | 1.06 | | 26 | 3.8 | -27.4 | 3.4 | 40 | 238 | 2 | 2T | 3 | 4 |
| 4 | 115 | 4.79 | 222 | 1.7 | 7 | -4.5 | 19.7 | 21 | 423.81 | 0 | 5T | 7 | 3 |
| | | | | | | | | | | 1 | 15 | 15 | 0 |
| 3.6 | 106 | 4.25 | 101 | 1.9 | 12.6 | 4.2 | 28.5 | 35 | 397.14 | 1 | 10T | 13 | 1 |
| 4 | 110 | 4.27 | 123 | 1.5 | 15.9 | -3.1 | 20.9 | 50 | 344 | 1 | 4T | 7 | 3 |
| 4.2 | 111 | 4.48 | 98 | 1.2 | 10.5 | 1.8 | 25.1 | 30 | 190 | 3 | 5T | 7 | 3 |
| 4.1 | 110 | 3.24 | 107 | 1.6 | 7.6 | -1.5 | 21.5 | 21 | 566.67 | 0 | 15 | 15 | 0 |
| 4.1 | 100 | 4.24 | 299 | 2.1 | 7.9 | -2.8 | 22.6 | 25 | 348 | 1 | 10T | 13 | 1 |
| 3.9 | 112 | 4.35 | 187 | 2 | 10.5 | 3.2 | 25.9 | 40 | 282.5 | 2 | 2TS | 4 | 4 |
| 3.5 | 110 | 3.97 | 142 | 1.1 | 9 | 0.9 | 23.9 | 35 | 217.14 | 2 | 6T | 9 | 3 |
| 3.2 | 108 | 4.51 | 252 | 1.7 | 7 | 1.3 | 26.6 | 90 | 54.44 | 4 | 5T | 7 | 3 |
| | | | | | | | | | | 1 | 15 | 15 | 0 |
| 4.3 | 110 | 3.89 | 251 | 2.2 | 8.7 | -4.4 | 20.1 | 25 | 432 | 0 | 4T | 7 | 3 |
| 3.2 | 99 | 3.62 | 101 | 13.6 | 10.9 | -14 | 13.2 | 100 | 55 | 4 | 2T | 3 | 4 |
| 3.8 | 101 | 4.75 | 253 | 1.4 | 13.8 | 1.7 | 25.7 | 30 | 326.67 | 1 | 8T | 12 | 2 |
| 3.1 | 110 | 4.13 | 181 | 2.1 | 10.3 | -2.9 | 20.3 | 31 | 254.84 | 2 | 13 | 13 | 1 |
| 4.2 | 105 | 3.98 | 124 | 1.5 | 14.1 | -0.6 | 22.6 | 21 | 433.33 | 0 | 2T | 3 | 4 |
| 3 | 109 | 3.96 | 244 | 1.4 | 14.3 | 9.8 | 33.5 | 40 | 192.5 | 3 | 6T | 9 | 3 |
| | | | | | | | | | | 0 | 15 | 15 | 0 |
| | | | | | | | | | | 0 | 13 | 13 | 1 |
| 8.6 | 101 | 4.62 | 4 | 18.6 | 6.8 | -19.6 | 9.6 | 100 | 40 | 4 | 2T | 3 | 4 |
| 4 | 111 | 3.75 | 150 | 5.6 | 13.7 | -10.3 | 17.6 | 100 | 72 | 4 | 2T | 3 | 4 |
| | | | | | | | | | | | | | |
| 4 | 105 | 3.87 | 118 | 2.2 | | 2.7 | 24.7 | 21 | 423.81 | 0 | 2T | 3 | 4 |
| 3 | 125 | 1.26 | | 3 | 9.5 | -7.7 | 18.1 | 21 | 364.29 | 1 | 5T | 7 | 3 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
| 5.1 | 93 | 3.39 | 103 | 2 | 11.8 | -0.3 | 23.5 | 60 | 215 | 2 | 9T | 12 | 2 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | 2 | 15 | 15 | 0 |

| vent4 | PLATE4 | PLAT4COD | BIL4 | BIL4COD | PR4 | SBP4 | DBP4 | CVS4 | sofa5 | intake5 | output5 | creat5 | CREAT5CO |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 180000 | 0 | 0.6 | 0 | 70 | 120 | 70 | 0 | 7 | 2390 | 1965 | 1.31 | 1 |
| | | | | | | | | | | | | | |
| 0 | 230000 | 0 | 0.9 | 0 | 110 | 110 | 70 | 4 | 4 | 900 | 450 | 3.27 | 2 |
| 1 | 50000 | 3 | 1 | 0 | 90 | 140 | 80 | 0 | 8 | 1786 | 460 | 3.5 | 3 |
| 0 | 200000 | 0 | 0.6 | 0 | 80 | 100 | 70 | 0 | 0 | 2305 | 1417 | 0.7 | 0 |
| 0 | 200000 | 0 | 0.8 | 0 | 80 | 120 | 80 | 0 | 0 | 3100 | 1400 | 0.77 | 0 |
| 1 | 35000 | 3 | 1.9 | 1 | 90 | 110 | 80 | 3 | 9 | 1957 | 780 | 3.83 | 3 |
| 1 | 33000 | 3 | 0.7 | 0 | 100 | 150 | 90 | 2 | 10 | 1511 | 3260 | 1.79 | 1 |
| 1 | 58000 | 2 | 0.9 | 0 | 75 | 130 | 75 | 4 | | | | | |
| 1 | 180000 | 0 | 0.5 | 0 | 86 | 140 | 80 | 0 | 0 | 2180 | 2410 | 0.6 | 0 |
| 1 | 55000 | 2 | 5.5 | 2 | 120 | 110 | 60 | 4 | | 200 | 100 | | |
| 1 | 120000 | 1 | 2.5 | 2 | 95 | 150 | 90 | 0 | 7 | 2080 | 1405 | 0.6 | 0 |
| 0 | 110000 | 1 | 0.7 | 0 | 125 | 110 | 50 | 2 | 5 | 1800 | 1055 | 1.66 | 1 |
| 1 | 90000 | 2 | 1 | 0 | 130 | 80 | 60 | 4 | 18 | 500 | 10 | 6 | 4 |
| 1 | 30000 | 3 | 0.6 | 0 | 120 | 115 | 70 | 4 | 15 | 39744 | 1415 | 0.92 | 0 |
| 1 | 163000 | 0 | 10 | 3 | 95 | 115 | 75 | 0 | 6 | 2520 | 2260 | 1.6 | 1 |
| 1 | 217000 | 0 | 0.5 | 0 | 120 | 120 | 70 | 2 | 7 | 2620 | 1770 | 1.63 | 1 |
| 1 | 90000 | 2 | 1.1 | 0 | 90 | 120 | 60 | 0 | 10 | 3214 | 660 | 4.3 | 3 |
| 1 | 45000 | 3 | 1.5 | 1 | 96 | 150 | 85 | 0 | 5 | 3438 | 2040 | 1.12 | 0 |
| 1 | 20000 | 4 | 6.7 | 3 | 120 | 140 | 80 | 0 | 14 | 4947 | 2920 | 0.83 | 0 |
| 1 | 10000 | 4 | 1 | 0 | 140 | 85 | 50 | 4 | | | | | |
| | | | | | | | | | | | | | |
| 1 | 131000 | 1 | 0.6 | 0 | 110 | 110 | 65 | 2 | 7 | 1700 | 3500 | 6 | 4 |
| 1 | 243000 | 0 | 0.6 | 0 | 90 | 140 | 80 | 0 | 1 | 1860 | 3875 | 0.88 | 0 |
| 1 | 44000 | 3 | 12 | 4 | 120 | 130 | 80 | 0 | 12 | 2351 | 3170 | 1.62 | 1 |
| 1 | 330000 | 0 | 0.5 | 0 | 90 | 145 | 75 | 0 | 8 | 2745 | 2731 | 2.96 | 2 |
| 0 | 200000 | 0 | 0.6 | 0 | 85 | 140 | 80 | 0 | 4 | 900 | 100 | 6.76 | 4 |
| 0 | 60000 | 2 | 1 | 0 | 80 | 100 | 70 | 0 | | | | | |
| 1 | 188000 | 0 | 2 | 2 | 100 | 150 | 80 | 0 | 6 | 1930 | 1815 | 0.64 | 0 |
| | | | | | | | | | | | | | |
| 0 | 345000 | 0 | 0.7 | 0 | 105 | 135 | 80 | 0 | 0 | 1450 | 1560 | 0.64 | 0 |
| 1 | 22000 | 3 | 1.9 | 1 | 100 | 95 | 65 | 4 | 19 | 3261 | 1520 | 2.12 | 2 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 160000 | 0 | 0.8 | 0 | 100 | 120 | 70 | 0 | 3 | 2650 | 1400 | 0.54 | 0 |
| 1 | 136000 | 1 | 2 | 2 | 120 | 125 | 75 | 0 | | | | | |
| 0 | 211000 | 0 | 0.7 | 0 | 80 | 160 | 70 | 0 | 1 | 3050 | 1530 | 0.66 | 0 |
| | | | | | | | | | | | | | |
| 0 | 180000 | 0 | 1.2 | 0 | 82 | 90 | 60 | 0 | 1 | 1500 | 1200 | 0.98 | 0 |
| 1 | 200000 | 0 | 2 | 2 | 80 | 120 | 60 | 0 | 2 | 1975 | 1510 | 0.64 | 0 |
| 1 | 9000 | 4 | 2.8 | 2 | 90 | 140 | 80 | 2 | 9 | 5448 | 4500 | 1.1 | 0 |
| 1 | 30000 | 3 | 3.3 | 2 | 85 | 120 | 70 | 2 | 12 | 1774 | 3525 | 4.38 | 3 |
| 1 | 101000 | 1 | 0.6 | 0 | 95 | 120 | 65 | 0 | 6 | 2824 | 5150 | 1 | 0 |
| 1 | 20000 | 4 | 1.3 | 1 | 110 | 90 | 50 | 4 | | | | | |
| 1 | 60000 | 2 | 3 | 2 | 100 | 130 | 80 | 3 | 13 | 1629 | 1120 | 4.17 | 3 |
| 1 | 43000 | 3 | 17 | 4 | 80 | 100 | 70 | 4 | 18 | 3500 | 30 | 0.85 | 0 |
| 1 | 16000 | 4 | 1 | 0 | 105 | 140 | 70 | 4 | 10 | 890 | 360 | 3.59 | 3 |
| 1 | 30000 | 3 | 5.6 | 2 | 105 | 105 | 55 | 4 | 20 | 1336 | 67 | 6.51 | 4 |
| 1 | 45000 | 3 | 1.5 | 1 | 85 | 120 | 85 | 3 | 14 | 1550 | 10 | 9.67 | 4 |
| 0 | 13000 | 4 | 8.17 | 3 | 90 | 110 | 70 | 3 | 11 | 1940 | 1055 | 2.51 | 2 |
| 0 | 75000 | 2 | 0.9 | 0 | 106 | 150 | 76 | 0 | 5 | 2518 | 3560 | 2.9 | 2 |
| 1 | 90000 | 2 | 2.5 | 2 | 120 | 125 | 70 | 0 | 7 | 2690 | 2175 | 1.2 | 0 |
| 0 | 170000 | 0 | 1.74 | 1 | 82 | 120 | 70 | 0 | 1 | 2530 | 2175 | 1.19 | 0 |
| 0 | 80000 | 2 | 1.4 | 1 | 90 | 130 | 85 | 0 | 7 | 1530 | 1800 | 8.55 | 4 |
| 1 | 105000 | 1 | 1.91 | | 95 | 120 | 80 | 0 | 16 | 3738 | 390 | 1.29 | 1 |
| 0 | 155000 | 0 | 0.5 | 0 | 85 | 120 | 70 | 0 | 4 | 1300 | 1650 | 5.69 | 4 |
| 0 | 180000 | 0 | 1 | 0 | 60 | 130 | 70 | 0 | 0 | 1000 | 800 | 0.97 | 0 |
| 0 | 30000 | 3 | 1.5 | 1 | 90 | 140 | 80 | 0 | 6 | 1818 | 445 | 4.9 | 3 |
| 0 | 150000 | 1 | 0.7 | 0 | 100 | 110 | 70 | 3 | 10 | 3817 | 1050 | 1.56 | 1 |
| 1 | 120000 | 1 | 1 | 0 | 80 | 150 | 90 | 0 | 7 | 2441 | 302 | 3.18 | 2 |
| 1 | 87000 | 2 | 1 | 0 | 90 | 140 | 80 | 0 | 5 | 2405 | 3510 | 0.63 | 0 |
| | | | | | | | | | | | | | |
| 1 | 60000 | 2 | 7 | 3 | 120 | 110 | 65 | 2 | 17 | 2050 | 150 | 4.04 | 3 |
| 0 | 180000 | 0 | 0.5 | 0 | 105 | 120 | 80 | 0 | 0 | 2500 | 1940 | 0.8 | 0 |
| 0 | 40000 | 3 | 1.3 | 1 | 90 | 170 | 90 | 0 | 9 | 1000 | 450 | 6.3 | 4 |
| 1 | 60000 | 2 | 0.4 | 0 | 90 | 120 | 60 | 0 | 4 | 3026 | 3670 | 1.16 | 0 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 75000 | 2 | 0.7 | 0 | 90 | 110 | 60 | 4 | 16 | 3413 | 190 | 3.5 | 4 |
| 0 | 136000 | 1 | 24 | 4 | 110 | 120 | 80 | 0 | 4 | 2130 | 1350 | 0.8 | 0 |
| 1 | 5000 | 4 | 3.5 | 2 | 160 | 70 | 50 | 4 | | | | | |
| 1 | 15000 | 4 | 9 | 3 | 105 | 110 | 65 | 3 | 13 | 5515 | 1830 | 1.28 | 1 |
| 1 | 59000 | 2 | 9.8 | 3 | 110 | 130 | 70 | 0 | 8 | 2970 | 1877 | 0.6 | 0 |
| 1 | 15000 | 4 | 8 | 3 | 10.1 | 115 | 65 | 4 | 19 | | | 2.5 | 2 |
| 1 | 35000 | 3 | 0.7 | 0 | 95 | 130 | 80 | 0 | 8 | 2040 | 2170 | 3.92 | 3 |
| 0 | 250000 | 0 | 1.7 | 1 | 130 | 140 | 95 | 0 | 2 | 2860 | 2050 | 1 | 0 |
| 1 | 60000 | 2 | 35 | 4 | 120 | 70 | 50 | 4 | | | | | |
| 0 | 75000 | 2 | 1.4 | 1 | 105 | 140 | 60 | 2 | 8 | 1299 | 4550 | 1.86 | 1 |
| 0 | 113000 | 1 | 1.2 | 0 | 80 | 130 | 80 | 0 | | | | | |
| 1 | 153000 | 0 | 0.7 | 0 | 110 | 130 | 70 | 2 | 6 | 1952 | 1215 | 0.82 | 0 |
| 1 | 160000 | 0 | 0.6 | 0 | 120 | 140 | 90 | 0 | 4 | 2325 | 1855 | 0.89 | 0 |
| 1 | 25000 | 3 | 2 | 2 | 85 | 120 | 70 | 0 | 9 | 2680 | 2081 | 1.02 | 0 |
| 0 | 35000 | 3 | 1.2 | 0 | 101 | 140 | 82 | 0 | 4 | 2020 | 1600 | 1.9 | 1 |
| 1 | 18000 | 4 | 0.8 | 0 | 140 | 135 | 75 | 0 | 7 | 2780 | 3230 | 1.68 | 1 |
| 1 | 45000 | 3 | 3.2 | 2 | 85 | 110 | 65 | 0 | 11 | 1953 | 2325 | 1.1 | 0 |
| 1 | 69000 | 2 | 0.6 | 0 | 100 | 140 | 65 | 2 | 9 | 1490 | 1535 | 1.05 | 0 |
| 1 | 113000 | 1 | 2.6 | 2 | 90 | 105 | 60 | 3 | 17 | 886 | 30 | 6.44 | 4 |
| 0 | 78000 | 2 | 10.1 | 3 | 124 | 140 | 90 | 0 | 6 | 1785 | 1450 | 1.36 | 1 |
| 1 | 165000 | 0 | 0.4 | 0 | 96 | 110 | 60 | 4 | 7 | 3296 | 1125 | 1.12 | 0 |
| 1 | 50000 | 3 | 6 | 3 | 130 | 70 | 50 | 4 | | | | | |
| 1 | 128000 | 1 | 1.4 | 1 | 90 | 135 | 80 | 0 | 4 | 2895 | 1925 | 0.9 | 0 |
| 0 | 180000 | 0 | 0.4 | 0 | 103 | 110 | 70 | 0 | 5 | 3457 | 3770 | 1.18 | 0 |
| 1 | 180000 | 0 | 0.7 | 0 | 130 | 120 | 70 | 4 | 5 | 3741 | 1235 | 0.78 | 0 |
| 1 | 160000 | 0 | 1.2 | 0 | 110 | 110 | 70 | 2 | 10 | 2443 | 2120 | 1.87 | 1 |
| 0 | 185000 | 0 | 0.7 | 0 | 100 | 110 | 80 | 0 | 0 | 2500 | 1800 | 0.45 | 0 |
| 0 | 110000 | 1 | 0.4 | 0 | 70 | 110 | 70 | 0 | 3 | 3150 | 1675 | 0.5 | 0 |
| 1 | 25000 | 3 | 3 | 2 | 150 | 80 | 40 | 4 | | | | | |
| 1 | 103000 | 1 | 2.7 | 2 | 130 | 110 | 60 | 4 | 18 | 1200 | 650 | 2.3 | 2 |
| | | | | | | | | | | | | | |
| 1 | 200000 | 0 | 8.5 | 3 | 90 | 120 | 75 | 0 | 8 | 2842 | 3015 | 1.33 | 1 |
| 1 | 180000 | 0 | 0.6 | 0 | 120 | 133 | 70 | 3 | 13 | 6617 | 440 | 3.92 | 3 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
| 1 | 45000 | 3 | 1 | 0 | 90 | 130 | 70 | 0 | | | | | |
| | | | | | | | | | | | | | |
| 0 | 30000 | 3 | 1 | 0 | 90 | 100 | 50 | 1 | 4 | 1200 | 850 | 0.85 | 0 |

| urea5 | PH5 | PCO25 | P5 | NA5 | K5 | CL5 | CA5 | GLU5 | LAC5 | HB5 | BEC5 | HCO351 | F5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 59 | 7.37 | 39 | 41 | 139 | 3.6 | 104 | 4.83 | 233 | 2.1 | 13 | -2.8 | 22.5 | 25 |
| | | | | | | | | | | | | | |
| 103 | 7.52 | 30 | 167 | 136 | 3.8 | 105 | 3.88 | 112 | 1.7 | 8 | 1.6 | 24.5 | 21 |
| 128 | 7.44 | 35 | 112 | 139 | 3.8 | 107 | 4.44 | 127 | 1 | 9.7 | -0.4 | 23.8 | 30 |
| 26 | | | | | | | | | | | | | |
| 25 | | | 90 | | | | | | | | | | 21 |
| 170 | 7.49 | 32 | 106 | 141 | 3.4 | 108 | 4.53 | 117 | 1.2 | 10.4 | 1.1 | 24.4 | 25 |
| 129 | 7.42 | 36 | 61 | 133 | 3.3 | 107 | 4.3 | 133 | 1.7 | 10.3 | -1.1 | 23.4 | 30 |
| | | | | | | | | | | | | | |
| 30 | 7.47 | 27 | 107 | 131 | 4.1 | 103 | 4.24 | 94 | 0.6 | 15 | -4 | 19.7 | 25 |
| | | | | | | | | | | | | | |
| 35 | 7.45 | 46 | 58 | 137 | 3.9 | 104 | 4.48 | 169 | 0.8 | 15.2 | 8 | 32 | 40 |
| 108 | 7.41 | 28 | 88 | 130 | 4.4 | 108 | 4.2 | 100 | 0.9 | 10.3 | -6.9 | 17.7 | 31 |
| 120 | 7.03 | 68 | 34 | 139 | 4.3 | 105 | 4.07 | 86 | 5.3 | 11.5 | -12.8 | 18 | 45 |
| 70 | 7.4 | 28 | 87 | 138 | 4.3 | 107 | 4.17 | 87 | 12.6 | 7.4 | -7.5 | 17.3 | 100 |
| 65 | 7.46 | 30 | 189 | 134 | 4.8 | 107 | 4.7 | 164 | 1 | 9.9 | -2.5 | 21.3 | 30 |
| 50 | 7.45 | 26 | 68 | 149 | 3.1 | 118 | 4.56 | 218 | 1.1 | 9.4 | -5.9 | 18.1 | 50 |
| 138 | 7.53 | 24 | 62 | 137 | 3.6 | 110 | 3.56 | 106 | 2.4 | 9.9 | -2.6 | 20.1 | 25 |
| 25 | 7.51 | 27 | 73 | 137 | 3.9 | 105 | 3.71 | 134 | 1.9 | 11.9 | -1.5 | 21.5 | 30 |
| 133 | | | | | | | | | | | | | |
| | 7.01 | 36 | 70 | 142 | 4.2 | 99 | 3.61 | 41 | 20 | 7.5 | -22 | 9.1 | 40 |
| | | | | | | | | | | | | | |
| 140 | 7.41 | 33 | 69 | 133 | 4.5 | 102 | 4.21 | 197 | 1 | 9.6 | -3.7 | 20.9 | 28 |
| 45 | 7.51 | 41 | 169 | 128 | 2.9 | 96 | 4.14 | 197 | 1.2 | 9.2 | 9.7 | 32.7 | 30 |
| 57 | 7.54 | 27 | 69 | 145 | 2.6 | 110 | 4.35 | 116 | 3.1 | 9.7 | 0.6 | 23.1 | |
| 86 | 7.35 | 34 | 78 | 139 | 4.4 | 109 | 4.28 | 246 | 0.7 | 11.7 | -6.8 | 18.8 | 30 |
| 82 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 32 | 7.49 | 34 | 60 | 143 | 3.3 | 109 | 4.25 | 141 | 0.6 | 10.3 | 2.6 | 25.9 | 30 |
| | | | | | | | | | | | | | |
| 34 | | | | | | | | | | | | | |
| 98 | 7.05 | 82 | 74 | 137 | 3.7 | 104 | 5.62 | 96 | 2.9 | 8.9 | -7.8 | 22.7 | 90 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 21 | 7.35 | 55 | 87 | 149 | 3.4 | 118 | 4.57 | 173 | 1 | 11.8 | 4.8 | 30.4 | 28 |
| | | | | | | | | | | | | | |
| 50 | | | | | | | | | | | | | |
| 45 | 7.5 | 36 | 79 | 138 | 3.5 | 106 | 4.05 | 130 | 1.3 | 8 | 4.9 | 28.1 | 24 |
| 140 | 7.56 | 33 | 166 | 145 | 2.6 | 113 | 3.91 | 200 | 2.4 | 12.3 | 7.3 | 29.5 | 40 |
| 135 | 7.29 | 35 | 99 | 133 | 4.4 | 100 | 4 | 79 | 1.3 | 11 | -9.8 | 16.8 | 31 |
| 70 | 7.58 | 33 | 56 | 140 | 2.9 | 106 | 3.8 | 273 | 2.2 | 10.1 | 9 | 30.9 | 30 |
| | | | | | | | | | | | | | |
| 296 | 7.29 | 46 | 71 | 143 | 4.8 | 112 | 3.81 | 106 | 2.4 | 11.4 | -4.5 | 22.1 | 30 |
| 35 | 7.12 | 45 | 17 | 137 | 2.9 | 105 | 5.12 | 83 | 12 | 6.4 | -14.7 | 14.6 | 100 |
| 111 | | | | | | | | | | | | | |
| 228 | 7.39 | 36 | 98 | 136 | 5.2 | 103 | 4.04 | 194 | 1.5 | 9.6 | -3.2 | 21.8 | 40 |
| 160 | 7.41 | 32 | 76 | 138 | 3.3 | 107 | 4.12 | 116 | 1 | 8.9 | -4.3 | 20.3 | 30 |
| 103 | 7.41 | 39 | 55 | 148 | 2.8 | 117 | 4.42 | 163 | 2.1 | 7.1 | 0.1 | 24.7 | 31 |
| 115 | | | | | | | | | | | | | |
| 55 | 7.48 | 26 | 86 | 134 | 4 | 107 | 4.24 | 163 | 0.7 | 8.1 | -4.1 | 19.4 | 21 |
| 69 | 7.5 | 32 | 109 | 130 | 4 | 102 | 4.06 | 133 | 1.7 | 11.7 | 1.8 | 25 | 24 |
| 147 | | | | | | | | | | 11.5 | | | |
| 53 | 7.37 | 40 | 88 | 148 | 3.7 | 117 | 3.91 | 114 | 3 | 7.7 | -2.2 | 23.1 | 80 |
| 124 | | | | | | | | | | | | | |
| 25 | | | | | | | | | | | | | |
| 150 | | | | | | | | | | | | | |
| 80 | 7.34 | 38 | 87 | 140 | 3.9 | 109 | 4.37 | 103 | 3.1 | 7.7 | -5.3 | 20.5 | 40 |
| 68 | 7.5 | 29 | 74 | 134 | 2.7 | 109 | 4.21 | 120 | 1.1 | 8.1 | -0.6 | 22.6 | 25 |
| 20 | 7.51 | 38 | 48 | 135 | 3.4 | 102 | 4.23 | 134 | 1.3 | 12.5 | 7.3 | 30.3 | 40 |
| | | | | | | | | | | | | | |
| 84 | | | 75 | | | | | | | | | | 30 |
| 30 | | | | | | | | | | | | | |
| 145 | | | | | | | | | | | | | |
| 120 | 7.51 | 32 | 75 | 145 | 2.3 | 110 | 4.25 | 147 | 2.3 | 9.9 | 2.5 | 25.5 | 21 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 134 | 7.32 | 14 | 123 | 138 | 3.7 | 109 | 3.28 | 153 | 7.7 | 12.7 | -18.9 | 7.2 | 35 |
| 35 | 7.35 | 37 | 84 | 147 | 3.6 | 123 | 4.78 | 103 | 1.4 | 7.2 | -5.2 | 20.4 | 21 |
| | | | | | | | | | | | | | |
| 116 | 7.54 | 31 | 76 | 144 | 3.9 | 110 | 4.32 | 98 | 3.8 | 7.6 | 4 | 26.5 | 60 |
| 55 | | | | | | | | | | | | | |
| 90 | 7.42 | 25 | 86 | 142 | 4.6 | 106 | 4.05 | 48 | 15.8 | 5.5 | -8.3 | 16.2 | 30 |
| 204 | 7.53 | 25 | 157 | 138 | 3.7 | 110 | 4.3 | 141 | 1.5 | 10.1 | -1.8 | 20.9 | 21 |
| 35 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 117 | 7.48 | 31 | 124 | 139 | 3.8 | 110 | 4.72 | 165 | 1 | 8.8 | -0.4 | 23.1 | 40 |
| | | | | | | | | | | | | | |
| 45 | 7.42 | 50 | 49 | 150 | 3.5 | 107 | 4.35 | 105 | 0.8 | 10.9 | 7.9 | 32.4 | 30 |
| 40 | 7.55 | 21 | 120 | 142 | 6 | 119 | 4.12 | 101 | 1.8 | 14.1 | -4 | 18.4 | 31 |
| 36 | 7.46 | 34 | 86 | 134 | 3.5 | 108 | 4.55 | 126 | 1.4 | 8.9 | 0.4 | 24.2 | 30 |
| 50 | | | | | | | | | | | | | |
| 87 | 7.53 | 30 | 77 | 139 | 3.7 | 106 | 3.72 | 138 | 1.5 | 7.5 | 2.4 | 25.1 | 40 |
| 120 | 7.45 | 42 | 59 | 147 | 4.1 | 115 | 4.34 | 138 | 1.2 | 10.5 | 5.2 | 29.2 | 30 |
| 79 | 7.52 | 31 | 62 | 141 | 3.1 | 107 | 3.87 | 199 | 1.3 | 8.5 | 2.4 | 25.3 | 35 |
| 166 | 7.35 | 47 | 49 | 142 | 4.1 | 108 | 4.88 | 125 | 2.2 | 7.6 | 0.3 | 25.9 | 70 |
| 50 | | | | | | | | | | | | | |
| 55 | 7.42 | 30 | 91 | 140 | 3.2 | 112 | 3.94 | 59 | 2.2 | 9.8 | -5 | 19.5 | 21 |
| | | | | | | | | | | | | | |
| 39 | 7.49 | 33 | 90 | 136 | 4.2 | 102 | 4.52 | 232 | 1.6 | 15 | 1.8 | 25.1 | 30 |
| 37 | 7.52 | 30 | 153 | 138 | 4.6 | 106 | 4.24 | 261 | 1.1 | 9.5 | 1.6 | 24.5 | 60 |
| 30 | 7.52 | 27 | 71 | 132 | 4.7 | 104 | 4.21 | 117 | 1.4 | 14.6 | -0.9 | 22 | 21 |
| 104 | 7.52 | 37 | 53 | 152 | 2.8 | 110 | 4.17 | 292 | 1.9 | 12.2 | 7.3 | 30.2 | 30 |
| 25 | | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 140 | 6.8 | 150 | 36 | 143 | 5.6 | 110 | 3.7 | 25 | 5.4 | 10.9 | | | 40 |
| | | | | | | | | | | | | | |
| 42 | 7.53 | 26 | 92 | 133 | 4.1 | 101 | 3.78 | 108 | 2.2 | 7.4 | -1 | 21.7 | 21 |
| 129 | 7.3 | 30 | 73 | 147 | 3.3 | 115 | 4.34 | 176 | 4.4 | 9.6 | -11.6 | 14.8 | 40 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | 14 | | | |
| | | | | | | | | | | | | | |
| | 6.89 | 75 | 46 | 128 | 6.7 | 85 | 4.54 | 651 | 13.3 | 9.1 | -18.7 | 14.4 | 60 |
| | | | | | | | | | | | | | |
| 60 | | | | | | | | | | | | | |

| PF5 | PF5COD | GCS5 | GCS55 | GCS5COD | vent5 | PLATE5 | PLAT5COD | BIL5 | BIL5COD | PR5 | SBP5 | DBP5 | CVS5 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 164 | 3 | 6T | 9 | 3 | 1 | 200000 | 0 | 0.6 | 0 | 90 | 140 | 80 | 0 |
| | | | | | | | | | | | | | |
| 795.24 | 0 | 15 | 15 | 0 | 0 | 227000 | 0 | 0.7 | 0 | 100 | 100 | 60 | 2 |
| 373.33 | 1 | 8T | 11 | 2 | 1 | 90000 | 2 | 0.9 | 0 | 90 | 140 | 80 | 0 |
| | | 15 | 15 | 0 | 0 | | 0 | 0.6 | 0 | 70 | 100 | 60 | 0 |
| 428.57 | 0 | 15 | 15 | 0 | 0 | 180000 | 0 | 0.8 | 0 | 70 | 130 | 80 | 0 |
| 424 | 0 | 9T | 12 | 2 | 1 | 39000 | 3 | 1.8 | 1 | 80 | 110 | 70 | 0 |
| 203.33 | 2 | 6T | 9 | 3 | 1 | 31000 | 3 | 0.8 | 0 | 100 | 140 | 80 | 1 |
| | | | | | | | | | | | | | |
| 428 | 0 | 15 | 15 | 0 | 0 | 160000 | 0 | 0.6 | 0 | 85 | 140 | 80 | 0 |
| | | | | | | | | | | | | | |
| 145 | 3 | 10TS=10T | 13 | 1 | 1 | 116000 | 1 | 2.6 | 2 | 90 | 140 | 80 | 0 |
| 283.87 | 2 | 13 | 13 | 1 | 0 | 101000 | 1 | 0.7 | 0 | 115 | 115 | 65 | 0 |
| 75.56 | 4 | 2T | 3 | 4 | 1 | 75000 | 2 | 1 | 0 | 55 | 60 | 40 | 4 |
| 87 | 4 | 2T | 3 | 4 | 1 | 30000 | 3 | 0.8 | 0 | 120 | 110 | 65 | 4 |
| 630 | 0 | 8T | 12 | 2 | 1 | 160000 | 0 | 9 | 3 | 90 | 135 | 80 | 0 |
| 136 | 3 | 10T | 13 | 1 | 1 | 200000 | 0 | 0.7 | 0 | 110 | 120 | 70 | 2 |
| 248 | 2 | 4T | 6 | 3 | 1 | 61000 | 2 | 1.1 | 0 | 100 | 130 | 70 | 0 |
| 243.33 | 2 | 10T | 13 | 1 | 1 | 120000 | 1 | 1.4 | 1 | 120 | 130 | 80 | 0 |
| | | 6TS | 9 | 3 | 1 | 9000 | 4 | 6.7 | 3 | 120 | 140 | 80 | 0 |
| 175 | 3 | 2T | 3 | 4 | 1 | 10000 | 4 | 1 | 0 | 140 | 70 | 50 | 4 |
| | | | | | | | | | | | | | |
| 246.43 | 2 | 15 | 15 | 0 | 0 | 130000 | 1 | 0.4 | 0 | 100 | 140 | 70 | 0 |
| 563.33 | 0 | 10T | 13 | 1 | 1 | 250000 | 0 | 0.6 | 0 | 100 | 150 | 85 | 0 |
| | | 7T | 10 | 2 | 1 | 45000 | 3 | 15.7 | 4 | 130 | 110 | 75 | 0 |
| 260 | 2 | 3T | 4 | 4 | 1 | 330000 | 0 | 0.4 | 0 | 90 | 170 | 90 | 0 |
| | 0 | 15 | 15 | 0 | 0 | 160000 | 0 | 0.6 | 0 | 80 | 130 | 80 | 0 |
| | | | | | | | | | | | | | |
| 200 | 2 | 5T | 7 | 3 | 1 | 175000 | 0 | 1.5 | 1 | 90 | 150 | 80 | 0 |
| | | | | | | | | | | | | | |
| | | 15 | 15 | 0 | 0 | 300000 | 0 | 0.8 | 0 | 98 | 130 | 80 | 0 |
| 82.22 | 4 | 2TS | 3 | 4 | 1 | 30000 | 3 | 2 | 2 | 110 | 100 | 60 | 4 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 8T | 12 | 2 | 1 | 150000 | 1 | 0.6 | 0 | 100 | 110 | 70 | 0 |
| | | | | | | | | | | | | | |
| 310.71 | 1 | 15 | 15 | 0 | 0 | 200000 | 0 | 0.6 | 0 | 96 | 150 | 80 | 0 |
| | | | | | 1 | | | | | | | | |
| | 1 | 15 | 1 | 0 | 0 | 180000 | 0 | 1.2 | 0 | 90 | 90 | 60 | 0 |
| 329.17 | 1 | 15 | 15 | 0 | 0 | 165000 | 0 | 1.8 | 1 | 80 | 130 | 70 | 0 |
| 415 | 0 | 4T | 6 | 3 | 1 | 9000 | 4 | 2.8 | 2 | 100 | 140 | 80 | 0 |
| 319.35 | 1 | 13 | 13 | 1 | 0 | 25000 | 3 | 3.2 | 2 | 80 | 135 | 70 | 2 |
| 186.67 | 3 | 8T | 12 | 2 | 1 | 136000 | 1 | 0.6 | 0 | 85 | 125 | 60 | 0 |
| | | | | | | | | | | | | | |
| 236.67 | 2 | 5T | 7 | 3 | 1 | 36000 | 3 | 4 | 2 | 90 | 120 | 80 | 0 |
| 17 | 4 | 2T | 3 | 4 | 1 | 62000 | 2 | 16 | 4 | 80 | 100 | 50 | 4 |
| | 1 | 8T | 12 | 2 | 1 | 16000 | 4 | 1 | 0 | 95 | 140 | 80 | 0 |
| 245 | 2 | 2T | 3 | 4 | 1 | 22000 | 3 | 7.2 | 3 | 110 | 110 | 65 | 4 |
| 253.33 | 2 | 8T | 12 | 2 | 1 | 75000 | 2 | 1.3 | 1 | 85 | 115 | 65 | 3 |
| 177.42 | 2 | 15 | 15 | 0 | 0 | 14000 | 4 | 8.5 | 3 | 90 | 110 | 60 | 0 |
| | 1 | 15 | 15 | 0 | 0 | 80000 | 2 | 0.7 | 0 | 100 | 150 | 80 | 0 |
| 409.52 | 0 | 5T | 7 | 3 | 1 | 90000 | 2 | 2 | 2 | 120 | 120 | 70 | 0 |
| 454.17 | 0 | 15 | 15 | 0 | 0 | 200000 | 0 | 1.7 | 1 | 80 | 110 | 70 | 0 |
| | 0 | | 15 | 0 | 0 | 90000 | 2 | 1.3 | 1 | 85 | 130 | 80 | 0 |
| 110 | 3 | 2T | 3 | 4 | 1 | 90000 | 2 | 2.5 | 2 | 100 | 122 | 80 | 4 |
| | 0 | 15 | 15 | 0 | 0 | 160000 | 0 | 0.6 | 0 | 85 | 130 | 80 | 0 |
| | 0 | 15 | 15 | 0 | 0 | 200000 | 0 | 1 | 0 | 66 | 130 | 70 | 0 |
| | 0 | 15 | 15 | 0 | 0 | 35000 | 3 | 1 | 0 | 80 | 150 | 85 | 0 |
| 217.5 | 2 | 11 | 11 | 2 | 0 | 120000 | 1 | 0.6 | 0 | 100 | 120 | 60 | 4 |
| 296 | 2 | 10T | 13 | 1 | 1 | 120000 | 1 | 1.3 | 1 | 106 | 160 | 80 | 0 |
| 120 | 3 | 10T | 13 | 1 | 1 | 110000 | 1 | 0.9 | 0 | 95 | 140 | 80 | 0 |
| | | | | | | | | | | | | | |
| 250 | | 2TS | 5 | 4 | | 75000 | 2 | 7.5 | 3 | 125 | 105 | 60 | 2 |
| | 0 | 15 | 15 | 0 | 0 | 179000 | 0 | 0.6 | 0 | 100 | 110 | 80 | 0 |
| | 1 | 15 | 15 | 0 | 0 | 45000 | 3 | 1.3 | 1 | 90 | 160 | 90 | 0 |
| 357.14 | 1 | 10T | 13 | 1 | 1 | 90000 | 2 | 0.6 | 0 | 90 | 120 | 60 | 0 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 351.43 | 1 | 2T | 3 | 4 | 1 | 45000 | 3 | 0.9 | 0 | 100 | 84 | 50 | 4 |
| 400 | 0 | 15 | 15 | 0 | 0 | 155000 | 0 | 24 | 4 | 110 | 130 | 80 | 0 |
| | | | | | | | | | | | | | |
| 126.67 | 3 | 7T | 10 | 2 | 1 | 11000 | 4 | 10 | 3 | 110 | 115 | 60 | 0 |
| | 2 | 13 | 13 | 1 | 0 | 90000 | 2 | 8.5 | 3 | 105 | 120 | 70 | 0 |
| 286.67 | 2 | 2T | 3 | 4 | 1 | 15000 | 4 | 11 | 3 | 120 | 90 | 15 | 4 |
| 747.62 | 0 | 5T | 7 | 3 | 1 | 75000 | 2 | 0.9 | 0 | 90 | 130 | 80 | 0 |
| | 1 | 15 | 15 | 0 | 0 | 250000 | 0 | 1.6 | 1 | 120 | 130 | 90 | 0 |
| | | | | | | | | | | | | | |
| 310 | 1 | 7T | 10 | 2 | 1 | 60000 | 2 | 0.9 | 0 | 110 | 160 | 70 | 2 |
| | | | | | | | | | | | | | |
| 163.33 | 3 | 10T | 14 | 1 | 1 | 160000 | 0 | 0.7 | 0 | 94 | 140 | 70 | 2 |
| 387.1 | 1 | 4T | 7 | 3 | 1 | 160000 | 0 | 0.6 | 0 | 120 | 120 | 70 | 0 |
| 286.67 | 2 | 6T | 9 | 3 | 1 | 21000 | 3 | 1.5 | 1 | 80 | 120 | 65 | 0 |
| | 0 | 15 | 15 | 0 | 0 | 30000 | 3 | 1.1 | 0 | 90 | 130 | 80 | 0 |
| 192.5 | 2 | 15 | 15 | 0 | 0 | 15000 | 4 | 1.2 | 0 | 135 | 140 | 70 | 0 |
| 196.67 | 3 | 2T | 3 | 4 | 1 | 94000 | 2 | 2.5 | 2 | 90 | 120 | 70 | 0 |
| 177.14 | 3 | 7T | 10 | 2 | 1 | 90000 | 2 | 0.6 | 0 | 100 | 140 | 70 | 2 |
| 70 | 4 | 5T | 7 | 3 | 1 | 115000 | 1 | 2.6 | 2 | 95 | 105 | 60 | 3 |
| | 0 | 15 | 15 | 0 | 0 | 57000 | 2 | 10.1 | 3 | 128 | 140 | 90 | 0 |
| 433.33 | 0 | 5TS | 8 | 3 | 1 | 180000 | 0 | 0.31 | 0 | 106 | 115 | 60 | 4 |
| | | | | | | | | | | | | | |
| 300 | 1 | 8T | 12 | 2 | 1 | 181000 | 0 | 1.3 | 1 | 105 | 140 | 90 | 0 |
| 255 | 2 | 6T | 9 | 3 | 1 | 200000 | 0 | 0.6 | 0 | 100 | 140 | 80 | 0 |
| 338.1 | 1 | 2T | 3 | 4 | 1 | 180000 | 0 | 0.7 | 0 | 130 | 120 | 70 | 0 |
| 176.67 | 3 | 6T | 9 | 3 | 1 | 140000 | 1 | 1.1 | 0 | 110 | 110 | 70 | 2 |
| | 0 | 15 | 15 | 0 | 0 | 170000 | 0 | 0.8 | 0 | 100 | 110 | 70 | 0 |
| | 1 | 14 | 14 | 1 | 0 | 110000 | 1 | 0.3 | 0 | 75 | 110 | 80 | 0 |
| | | | | | | | | | | | | | |
| 90 | 4 | 2T | 3 | 4 | 1 | 90000 | 2 | 2.8 | 2 | 120 | 90 | 50 | 4 |
| | | | | | | | | | | | | | |
| 438.1 | 0 | 3T | 4 | 4 | 1 | 233000 | 0 | 10.7 | 3 | 90 | 140 | 80 | 0 |
| 182.5 | 3 | 5T | 7 | 3 | 1 | 180000 | 0 | 0.8 | 0 | 130 | 110 | 60 | 4 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
| 76.67 | 4 | 3T | 4 | 4 | 1 | 40000 | 3 | 1.4 | 1 | 120 | 80 | 40 | 4 |
| | | | | | | | | | | | | | |
| | 1 | 15 | 15 | 0 | 0 | 35000 | 3 | 0.9 | 0 | 82 | 110 | 60 | 0 |

| sofa6 | intake6 | output6 | creat6 | CREAT6COl | urea6 | PH6 | PCO26 | P6 | NA6 | K6 | CL6 | CA6 | GLU6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 2000 | 1450 | 1.17 | 0 | 56 | 7.47 | 30 | 91 | 137 | 3.3 | 107 | 4.93 | 316 |
| | | | | | | | | | | | | | |
| 6 | 1129 | 190 | 3.69 | 3 | 138 | 7.53 | 23 | 80 | 131 | 4.5 | 99 | 3.79 | 201 |
| 7 | 1880 | 2165 | 3.52 | 3 | 164 | 7.38 | 34 | 72 | 137 | 3.9 | 104 | 4.19 | 131 |
| 0 | 2550 | 1685 | | | | | | | | | | | |
| | 2875 | 1450 | 0.7 | 0 | 30 | | | 80 | | | | | |
| 11 | 1534 | 1750 | 3.48 | 3 | 169 | 7.46 | 36 | 75 | 143 | 2.7 | 110 | 4.43 | 125 |
| 10 | 1863 | 2375 | 1.33 | 1 | 122 | 7.51 | 32 | 58 | 143 | 2.6 | 112 | 4.44 | 185 |
| | | | | | | | | | | | | | |
| 0 | 3140 | 1875 | 0.65 | 0 | 25 | | | | | | | | |
| | | | | | | | | | | | | | |
| 7 | 2550 | 1315 | 0.65 | 0 | 38 | 7.39 | 54 | 60 | 144 | 3.9 | 107 | 4.82 | 186 |
| 5 | 2430 | 2230 | 1.88 | 1 | 80 | 7.4 | 27 | 100 | 131 | 5.3 | 108 | 4.29 | 93 |
| | | | | | | | | | | | | | |
| 14 | 2427 | 1300 | 1 | 0 | 91 | 7.55 | 30 | 134 | 148 | 2.8 | 113 | 4.22 | 132 |
| 6 | 2250 | 2000 | 1.49 | 1 | 52 | 7.41 | 32 | 112 | 130 | 4.5 | 99 | 4.59 | 136 |
| 7 | 1898 | 2165 | 1.3 | 1 | 45 | 7.44 | 34 | 55 | 147 | 3.9 | 115 | 4.43 | 201 |
| | | | | | | | | | | | | | |
| 3 | 2910 | 1310 | 0.95 | 0 | 29 | 7.45 | 24 | 91 | 134 | 4.2 | 106 | 4.24 | 185 |
| 14 | 5013 | 3200 | 1.14 | 0 | 139 | 7.47 | 41 | 57 | 150 | 4.4 | 112 | 4.41 | 156 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 5 | 2090 | 2300 | 5.98 | 4 | 138 | | | | | | | | |
| 2 | 1145 | 2895 | 0.85 | 0 | 42 | 7.43 | 47 | 71.3 | 131 | 3.6 | 100 | 4.04 | |
| 14 | 3790 | 2682 | 1.73 | 1 | 62 | 7.52 | 27 | 57 | 142 | 3.4 | 111 | 4.27 | 101 |
| 8 | 3136 | 3875 | 2.82 | 2 | 91 | 7.45 | 31 | 77 | 142 | 3.6 | 111 | 4.6 | 210 |
| 4 | 875 | 70 | 6.52 | 4 | 71 | | | | | | | | |
| | | | | | | | | | | | | | |
| 4 | 2052 | 2007 | 0.77 | 0 | 32 | 7.4 | 44 | 100 | 138 | 3.2 | 106 | 4.08 | 121 |
| | | | | | | | | | | | | | |
| 0 | 2400 | 1900 | 0.65 | 0 | 25 | | | | | | | | |
| 20 | 2277 | 1305 | 2.55 | 2 | 95 | 7.14 | 55 | 64 | 129 | 4.2 | 100 | 4.08 | 85 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 2700 | 1100 | 0.5 | 0 | 30 | | | | | | | | |
| | | | | | | | | | | | | | |
| 2 | 2260 | 1445 | 0.6 | 0 | 25 | 7.4 | 46 | 61 | 146 | 3.6 | 112 | 4.64 | 179 |
| | | | | | | | | | | | | | |
| 2 | 1450 | 1000 | 1.2 | 0 | 60 | | | | | | | | |
| 3 | 2125 | 2405 | 0.65 | 0 | 35 | | | | | | | | |
| 12 | 3194 | 4610 | 0.85 | 0 | 95 | 7.6 | 34 | 54 | 147 | 2 | 110 | 4.02 | 134 |
| 10 | 1034 | 2950 | 4.1 | 3 | 120 | 7.41 | 35 | 96 | 139 | 3.2 | 102 | 3.85 | 96 |
| 4 | 1757 | 3795 | 0.89 | 0 | 66 | 7.51 | 40 | 39 | 139 | 3.7 | 106 | 3.96 | 106 |
| | | | | | | | | | | | | | |
| 13 | 1328 | 1740 | 4.16 | 3 | 298 | 7.34 | 45 | 26 | 143 | 4.7 | 109 | 3.31 | 166 |
| | | | | | | | | | | | | | |
| 8 | 932 | 1200 | 3.87 | 3 | 156 | 7.33 | 46 | 165 | 142 | 3.5 | 110 | 4.25 | 88 |
| 19 | 1445 | 60 | 5.41 | 4 | 197 | 7.44 | 30 | 100 | 133 | 6.1 | 103 | 4.01 | 202 |
| 13 | 1245 | 50 | 9.33 | 4 | 155 | 7.43 | 32 | 68 | 138 | 3.5 | 104 | 4.13 | 113 |
| | 2770 | 1095 | 2.2 | 2 | | 7.41 | 39 | 45 | 148 | 2.8 | 117 | 4.42 | 163 |
| 4 | 1997 | 2600 | 2.55 | 2 | 107 | | | | | | | | |
| 9 | 2460 | 2470 | 1.2 | 0 | 45 | 7.48 | 26 | 86 | 134 | 4 | 107 | 4.24 | 163 |
| | 650 | 1100 | 0.77 | 0 | 42 | | | | | | | | |
| 6 | 2000 | 1950 | 11 | 4 | 183 | | | | | | | | |
| 17 | | 200 | 1.57 | 1 | 67 | 7.27 | 43 | 78 | 147 | 3.8 | 111 | 4.29 | 152 |
| 4 | 2230 | 1750 | 5.9 | 4 | 130 | | | | | | | | |
| | 1200 | 900 | 0.87 | 0 | 20 | | | | | | | | |
| 6 | 2815 | 1145 | 5.2 | 4 | 145 | | | | | | | | |
| 11 | 4562 | 115 | 1.6 | 1 | 83 | 7.3 | 35 | 104 | 138 | 4.4 | 109 | 4.39 | 118 |
| 3 | 2150 | 730 | 3.27 | 2 | 74 | 7.44 | 27 | 134 | 134 | 3 | 110 | 4.31 | 90 |
| 5 | 890 | 1950 | 0.58 | 0 | 20 | 7.46 | 42 | 59 | 139 | 3.4 | 104 | 4.66 | 125 |
| | | | | | | | | | | | | | |
| 16 | 2000 | 100 | 2.96 | 2 | 57 | | | 60 | | | | | |
| 0 | 2390 | 1960 | 0.8 | 0 | 27 | | | | | | | | |
| 7 | 1425 | 250 | 5.7 | 4 | 129 | | | | | | | | |
| 4 | 3316 | 3950 | 1.25 | 1 | 113 | 7.43 | 43 | 37 | 146 | 2.2 | 108 | 4.18 | 154 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14 | 1000 | 50 | 2.31 | 2 | 94 | 7.42 | 20 | 119 | 140 | 4.6 | 111 | 5.18 | 50 |
| | 2450 | 1460 | 0.79 | 0 | 30 | | | | | | | | |
| | | | | | | | | | | | | | |
| 13 | 3162 | 2540 | 1.59 | 1 | 129 | 7.51 | 33 | 98 | 138 | 2.5 | 103 | 4.14 | 98 |
| 5 | 1950 | 4750 | 0.6 | 0 | 50 | | | | | | | | |
| | | | | | | | | | | | | | |
| 6 | 2440 | 2500 | 3.45 | 3 | 192 | 7.55 | 24 | 142 | 138 | 3.6 | 109 | 4.41 | 109 |
| 2 | 1600 | 1350 | 0.9 | 0 | 30 | | | | | | | | |
| | | | | | | | | | | | | | |
| 3 | 2165 | 755 | 1.42 | 1 | 100 | | | | | | | | |
| | | | | | | | | | | | | | |
| 1 | 2000 | 2080 | 0.65 | 0 | 35 | 7.51 | 35 | 72 | 134 | 3 | 103 | 4.33 | 116 |
| 4 | 3389 | 1770 | 0.62 | 0 | 30 | 7.46 | 36 | 94 | 150 | 3.1 | 115 | 4.59 | 142 |
| 5 | 1320 | 2540 | 0.64 | 0 | 35 | 7.48 | 34 | 69 | 135 | 3.5 | 108 | 4.6 | 114 |
| 5 | 1625 | 1250 | 2.12 | 2 | 55 | | | | | | | | |
| 6 | 3877 | 2370 | 1 | 0 | 51 | 7.57 | 27 | 85 | 143 | 2.6 | 112 | 3.92 | 91 |
| 7 | 2673 | 3700 | 0.84 | 0 | 78 | 7.49 | 40 | 85 | 159 | 3.9 | 113 | 4.45 | 188 |
| 6 | 1847 | 2110 | 0.92 | 0 | 68 | 7.48 | 45 | 53 | 145 | 3.4 | 109 | 3.94 | 113 |
| 19 | 400 | 5 | 7 | 4 | 180 | 7.3 | 52 | 49 | 138 | 4.7 | 107 | 4.82 | 117 |
| 5 | 1750 | 850 | 1.03 | 0 | 40 | | | | | | | | |
| 5 | 1425 | 1620 | 0.96 | 0 | 35 | 7.5 | 32 | 69 | 140 | 2.8 | 107 | 3.69 | 174 |
| | | | | | | | | | | | | | |
| 3 | 2906 | 1320 | 1.07 | 0 | 48 | 7.45 | 36 | 109 | 139 | 3.3 | 105 | 4.52 | 247 |
| 4 | 4910 | 2660 | 1.29 | 1 | 44 | 7.46 | 40.3 | 278 | 139 | 4.3 | 110 | 1.14 | |
| 5 | 2870 | 930 | 0.73 | 0 | 69 | 7.42 | 35 | 77 | 143 | 4.1 | 107 | 4.46 | 152 |
| 6 | 1892 | 2365 | 1.53 | 1 | 97 | 7.45 | 51 | 66 | 154 | 2.9 | 114 | 4.03 | 219 |
| 0 | 2200 | 1000 | 0.45 | 0 | 25 | | | | | | | | |
| | | | 0.5 | 0 | 25 | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 7 | 1580 | 2605 | 1.16 | 0 | 38 | 7.51 | 29 | 84 | 133 | 3.4 | 102 | 3.91 | 96 |
| 12 | | | 4.75 | 3 | 139 | 7.32 | 30 | 125 | 145 | 3.7 | 111 | 4.23 | 164 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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| LAC6 | HB6 | BEC6 | HCO36 | F6 | PF6 | PF6COD | GCS6 | GCS66 | GCS6COD | vent6 | PLATE6 | PLAT6COD | BIL6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.3 | 9.4 | -1.9 | 21.8 | 21 | 433.33 | 0 | 6T | 9 | 3 | 1 | 200000 | 0 | 0.8 |
| | | | | | | | | | | | | | |
| 2.5 | 7.8 | -3.5 | 19.2 | 21 | 380.95 | 1 | 15 | 15 | 0 | 0 | 220000 | 0 | 0.5 |
| 1.5 | 13.7 | -5 | 20.1 | 21 | 342.86 | 1 | 10T | 13 | 1 | 1 | 120000 | 1 | 1.3 |
| | | | | | | | 15 | 15 | 0 | 0 | | | 0.5 |
| | | | | 21 | 380.95 | 1 | 15 | 15 | 0 | 0 | 200000 | 0 | 0.8 |
| 1.1 | 8.7 | 1.8 | 25.6 | 50 | 150 | 3 | 10T | 13 | 1 | 1 | 39000 | 3 | 1.4 |
| 1.6 | 9.9 | 2.5 | 25.5 | 30 | 193.33 | 3 | 4T | 6 | 3 | 1 | 30000 | 3 | 0.8 |
| | | | | | | | | | | | | | |
| | | | | | | 0 | 15 | 15 | 0 | 0 | 180000 | 0 | 0.6 |
| | | | | | | | | | | | | | |
| 0.9 | 14.8 | 7.7 | 32.7 | 60 | 100 | 3 | 10TS=11T | 14 | 1 | 1 | 120000 | 1 | 2.2 |
| 1.4 | 10.7 | -8.1 | 16.7 | 80 | 125 | 2 | 13 | 13 | 1 | 0 | 101000 | 1 | 0.8 |
| | | | | | | | | | | | | | |
| 5.2 | 5.1 | 3.8 | 26.2 | 50 | 268 | 2 | 2T | 3 | 4 | 1 | 15000 | 4 | 1 |
| 0.9 | 10.3 | -4.3 | 20.3 | 30 | 373.33 | 1 | 9TS=10T | 13 | 1 | 1 | 160000 | 0 | 8.7 |
| 1.1 | 9.3 | -1.1 | 23.1 | 40 | 137.5 | 3 | 10T | 13 | 1 | 1 | 230000 | 0 | 0.7 |
| | | | | | | | | | | | | | |
| 1.2 | 10.5 | -7.3 | 16.7 | 25 | 364 | 1 | 10T | 13 | 1 | 1 | 155000 | 0 | 1.3 |
| 4.2 | 11.3 | 6.1 | 29.8 | 90 | 63.33 | 4 | 4TS | 7 | 3 | 1 | 20000 | 4 | 7 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | 1 | 15 | 15 | 0 | 0 | 160000 | 0 | 0.4 |
| 1.6 | 9.1 | 6.4 | 30 | 24 | 297.08 | 2 | 15 | 15 | 0 | 0 | 250000 | 0 | 0.6 |
| 4 | | -0.9 | 22 | 25 | 228 | 2 | 8T | 11 | 2 | 1 | 42000 | 3 | 17.5 |
| 0.6 | 11 | -2.5 | 21.5 | 30 | 256.67 | 2 | 3T | 4 | 4 | 1 | 405000 | 0 | 0.4 |
| | | | | | | | 15 | 15 | 0 | 0 | 180000 | 0 | 0.6 |
| | | | | | | | | | | | | | |
| 0.9 | 9.8 | 2.5 | 27.3 | 50 | 200 | 2 | 8T | 12 | 2 | 1 | 180000 | 0 | 1.2 |
| | | | | | | | | | | | | | |
| | | | | | | 0 | 15 | 15 | 0 | 0 | 294000 | 0 | 0.7 |
| 4.3 | 9.2 | -10.3 | 18.7 | 100 | 64 | 4 | 2TS | 3 | 4 | 1 | 16000 | 4 | 2 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0 | 8T | 13 | 1 | 1 | 150000 | 1 | 0.7 |
| | | | | | | | | | | | | | |
| 1.9 | 10.9 | 3.7 | 28.5 | 21 | 290.48 | 2 | 15 | 15 | 0 | 0 | 200000 | 0 | 0.6 |
| | | | | | | | | | | | | | |
| | 14.5 | | | | | | 15 | 15 | 0 | | 214000 | 0 | 1.2 |
| | | | | | | 1 | 15 | 15 | 0 | 0 | 146000 | 1 | 1.5 |
| 2.1 | 9.5 | 11.8 | 33.4 | 30 | 180 | 3 | 6T | 9 | 3 | 1 | 8000 | 4 | 2.9 |
| 1 | 11.3 | -2.4 | 22.2 | 21 | 457.14 | 0 | 15 | 15 | 0 | 0 | 40000 | 3 | 2.8 |
| 0.8 | 10 | 8.9 | 31.9 | 24 | 162.5 | 3 | 10T | 13 | 1 | 1 | 168000 | 0 | 0.7 |
| | | | | | | | | | | | | | |
| 0.9 | 8.6 | -1.5 | 24.3 | 25 | 104 | 3 | 4T | 6 | 3 | 1 | 72000 | 2 | 5 |
| | | | | | | | | | | | | | |
| 0.9 | 8.3 | -1.6 | 24.3 | 40 | 412.5 | 0 | 10T | 13 | 1 | 1 | 16000 | 4 | 1 |
| 2 | 8.8 | -3.8 | 20.4 | 30.51 | 327.76 | 1 | 2T | 3 | 4 | 1 | 30000 | 3 | 7.5 |
| 1.7 | 8 | -3.1 | 21.2 | 30 | 226.67 | 2 | 6T | 9 | 3 | 1 | 133000 | 1 | 1.1 |
| 2.1 | 7.1 | 0.1 | 24.7 | 31 | 145.16 | | 15 | 15 | 0 | | 15000 | 4 | 9 |
| | | | | | | 0 | 15 | 15 | 0 | 0 | 80000 | 2 | 0.8 |
| 0.7 | 8.1 | -4.1 | 19.4 | 21 | 409.52 | 0 | 5T | 7 | 3 | 1 | 10000 | 4 | 2.3 |
| | | | | | | | | | | | 241000 | 0 | 1.7 |
| | | | | | | 0 | 15 | 15 | 0 | 0 | 100000 | 2 | 1.2 |
| 6.5 | 6.4 | -7.2 | 19.7 | 90 | 86.67 | 4 | 2T | 3 | 4 | 1 | 66000 | 2 | 5.9 |
| | | | | | | 0 | 15 | 15 | 0 | 0 | 165000 | 0 | 0.4 |
| | | | | | | 0 | 15 | 15 | 0 | 0 | 200000 | 0 | 1 |
| | | | | | | | 15 | 15 | 0 | 0 | 60000 | 2 | 0.8 |
| 5.2 | 11.4 | -9.2 | 17.2 | 50 | 208 | 2 | 6T | 8 | 3 | 1 | 101000 | 1 | 0.6 |
| 0.7 | 7.5 | -5.9 | 18.3 | 24 | 558.33 | 0 | 15 | 15 | 0 | 0 | 120000 | 1 | 1 |
| 0.6 | 13.4 | 6.1 | 29.9 | 21 | 280.95 | 2 | 8T | 11 | 2 | 1 | 110000 | 1 | 1 |
| | | | | | | | | | | | | | |
| | | | | 40 | 150 | 3 | 2TS | 5 | 4 | 1 | 45000 | 3 | 8.4 |
| | | | | | | 0 | 15 | 15 | 0 | 0 | 175000 | 0 | 0.6 |
| | | | | | | 1 | 15 | 15 | 0 | 0 | 65000 | 2 | 1.1 |
| 2.3 | 11.1 | 4.2 | 28.5 | 21 | 176.19 | 2 | 15 | 15 | 0 | 0 | 101000 | 1 | 0.6 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 7.5 | -11.5 | 13 | 35 | 340 | 1 | 2T | 3 | 4 | 1 | 45000 | 3 | 0.8 |
| | | | | | | 0 | 15 | 15 | | 0 | 175000 | 0 | 23.5 |
| | | | | | | | | | | | | | |
| 5.5 | 7 | 3.3 | 26.3 | 45 | 217.78 | 2 | 7T | 10 | 2 | 1 | 8000 | 4 | 12.6 |
| | | | | | | 1 | 15 | 15 | 0 | 0 | 101000 | 1 | 8 |
| | | | | | | | | | | | | | |
| 1.1 | 9.8 | -1.4 | 21 | 21 | 676.19 | 0 | 9T | 12 | 2 | 1 | 101000 | 1 | 0.9 |
| | | | | | | 1 | 15 | 15 | 0 | 0 | 250000 | 0 | 1.8 |
| | | | | | | | | | | | | | |
| | | | | | | 0 | 15 | 15 | 0 | 0 | 59000 | 2 | 0.7 |
| | | | | | | | | | | | | | |
| 1.6 | 10.4 | 4.9 | 27.9 | 21 | 342.86 | 1 | 15 | 15 | 0 | 0 | 165000 | 0 | 0.5 |
| 1.2 | 13.8 | 1.8 | 25.6 | 30 | 313.33 | 1 | 3T | 6 | 3 | 1 | 184000 | 0 | 0.6 |
| 0.7 | 9.1 | 1.8 | 25.3 | 30 | 230 | 2 | 10T | 13 | 1 | 1 | 75000 | 2 | 1.2 |
| | | | | | | 0 | 15 | 15 | 0 | 0 | 35000 | 3 | 1.1 |
| 1.2 | 8.8 | 2.7 | 24.7 | 40 | 212.5 | 2 | 15 | 15 | 0 | 0 | 20000 | 4 | 1.2 |
| 1.7 | 9.8 | 7.2 | 30.5 | 30 | 283.33 | 2 | 8T | 12 | 2 | 1 | 110000 | 1 | 2 |
| 2 | 9.2 | 10 | 33.5 | 40 | 132.5 | 3 | 7T | 10 | 2 | 1 | 120000 | 1 | 0.8 |
| 1.6 | | -0.8 | 25.6 | 75 | 65.33 | 4 | 3T | 4 | 4 | 1 | 108000 | 1 | 2.8 |
| | | | | | | 0 | 15 | 15 | 0 | 0 | 59000 | 2 | 9 |
| 1.1 | 8.3 | 1.8 | 25 | 21 | 328.57 | 1 | 10T | 13 | 1 | 1 | 184000 | 0 | 0.4 |
| | | | | | | | | | | | | | |
| 1.8 | 12.9 | 1 | 25 | 30 | 363.33 | 1 | 8T | 11 | 2 | 1 | 183000 | 0 | 1.1 |
| 1.1 | 8.2 | 4.8 | 28.8 | 50 | 556 | 0 | 6T | 9 | 3 | 1 | 247000 | 0 | 0.6 |
| 3.6 | 17.7 | -1.8 | 22.7 | 21 | 366.67 | 1 | 4T | 6 | 3 | 1 | 150000 | 1 | 0.9 |
| 1.6 | 13.6 | 11.4 | 35.4 | 31 | 212.9 | 2 | 10T | 13 | 1 | 1 | 160000 | 0 | 1.1 |
| | | | | | | 0 | 15 | 15 | 0 | 0 | 180000 | 0 | 0.7 |
| | | | | | | 0 | 14 | 14 | 1 | 0 | 110000 | 1 | 0.4 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 1.5 | 9.1 | 0.1 | 23.1 | 21 | 400 | 0 | 2T | 3 | 4 | 1 | 230000 | 0 | 10 |
| 4.6 | 10.8 | -10.6 | 15.5 | 60 | 208.33 | 2 | 4T | 6 | 3 | 1 | 180000 | 0 | 1 |

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| BIL6COD | PR6 | SBP6 | DBP6 | CVS6 | sofa7 | intake7 | output7 | creat7 | CREAT7COI | urea7 | PH7 | PCO27 | P7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 110 | 150 | 90 | 0 | 2 | 2500 | 2000 | 1.05 | 0 | 54 | 7.5 | 32 | 159 |
| | | | | | | | | | | | | | |
| 0 | 100 | 100 | 60 | 2 | 4 | 992 | 180 | 4.07 | 3 | 165 | 7.5 | 23 | 81 |
| 1 | 95 | 150 | 90 | 0 | 7 | 1886 | 1260 | 4.16 | 3 | 198 | 7.31 | 39 | 94 |
| 0 | 80 | 110 | 70 | 0 | 0 | 2560 | 1000 | | | | | | |
| 0 | | | | | | | | | | | | | |
| 1 | 80 | 120 | 75 | 0 | 7 | 2010 | 4100 | 2.58 | 2 | 115 | | | |
| 0 | 110 | 140 | 80 | 0 | | 1994 | 1050 | 0.93 | 0 | 99 | 7.43 | 43 | 180 |
| | | | | | | | | | | | | | |
| 0 | 80 | 140 | 80 | 0 | 0 | 2150 | 1450 | 0.8 | 0 | 30 | | | |
| | | | | | | | | | | | | | |
| 2 | 90 | 150 | 90 | 0 | 7 | 2530 | 1335 | 0.67 | 0 | 35 | 7.32 | 57 | 56 |
| 0 | 120 | 110 | 70 | 0 | 4 | 2000 | 900 | 1.77 | 1 | 95 | | | |
| | | | | | | | | | | | | | |
| 0 | 120 | 120 | 70 | 4 | | | | | | | | | |
| 3 | 100 | 130 | 70 | 0 | 4 | 1800 | 1600 | 1.45 | 1 | 45 | | | |
| 0 | 115 | 125 | 70 | 2 | 5 | 1251 | 2180 | 1.31 | 1 | 35 | 7.56 | 28 | 70 |
| | | | | | | | | | | | | | |
| 1 | 115 | 110 | 66 | 0 | 3 | 1942 | 2325 | 0.89 | 0 | 28 | 7.38 | 20 | 100 |
| 3 | 110 | 140 | 90 | 0 | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 0 | 100 | 130 | 80 | 0 | 5 | 1295 | 2400 | 5.36 | 4 | 108 | | | |
| 0 | 100 | 140 | 90 | 0 | 0 | 1500 | 1900 | 0.85 | 0 | 40 | | | |
| 4 | 135 | 125 | 75 | 2 | 14 | 1638 | 2355 | 1.55 | 1 | 70 | 7.48 | 33 | 63 |
| 0 | 96 | 170 | 90 | 0 | 5 | 2343 | 3675 | 2.5 | 2 | 91 | 7.43 | 36 | 82 |
| 0 | 80 | 130 | 80 | 0 | 4 | 1050 | 20 | 7.61 | 4 | 99 | | | |
| | | | | | | | | | | | | | |
| 0 | 95 | 130 | 70 | 0 | | 2000 | 1700 | 0.7 | 0 | 32 | 7.49 | 37 | 78 |
| | | | | | | | | | | | | | |
| 0 | 92 | 130 | 80 | 0 | 0 | 2450 | 2000 | 0.62 | 0 | 25 | | | |
| 2 | 80 | 80 | 55 | 4 | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 100 | 120 | 80 | 0 | 1 | 2850 | 1650 | 0.44 | 0 | 25 | | | |
| | | | | | | | | | | | | | |
| 0 | 90 | 110 | 60 | 0 | 1 | 2340 | 1560 | 0.65 | 0 | 26 | | | |
| | | | | | | | | | | | | | |
| 0 | 95 | 90 | 60 | 0 | 8 | 2613 | 300 | 1.52 | 1 | 62 | 7.34 | 20 | 226 |
| 1 | 80 | 120 | 70 | 0 | 1 | 2324 | 2080 | 0.64 | 0 | 30 | | | |
| 2 | 90 | 150 | 90 | 0 | 10 | 2376 | 3320 | 0.68 | 0 | 65 | 7.37 | 26 | 84 |
| 2 | 85 | 130 | 75 | 2 | 7 | 1550 | 1700 | 3.5 | 3 | 120 | | | |
| 0 | 90 | 120 | 60 | 0 | 0 | 2160 | 2020 | 0.76 | 0 | 55 | 7.5 | 32 | 103 |
| | | | | | | | | | | | | | |
| 2 | 90 | 130 | 80 | 0 | 12 | 1500 | 1250 | 3.91 | 3 | 323 | 7.42 | 37 | 76 |
| | | | | | | | | | | | | | |
| 0 | 100 | 140 | 80 | 0 | 4 | 1656 | 1365 | 2.53 | 2 | 139 | 7.43 | 38 | 97 |
| 3 | 115 | 110 | 65 | 4 | 20 | 1329 | 50 | 7.5 | 4 | 210 | 7.38 | 30 | 67 |
| 0 | 85 | 130 | 80 | 3 | 12 | 753 | 35 | 10 | 4 | 160 | 7.49 | 27 | 52 |
| 3 | 80 | 120 | 60 | 0 | | | | 2.27 | 2 | | 7.34 | 39 | 49 |
| 0 | 90 | 140 | 80 | 0 | 3 | 2950 | 2300 | 1.82 | 1 | 85 | | | |
| 2 | 120 | 120 | 75 | 0 | | 900 | 400 | | | | | | 70 |
| 1 | 80 | 130 | 80 | 0 | 1 | 900 | 1000 | 0.75 | 0 | 40 | | | |
| 0 | 85 | 140 | 80 | 0 | 6 | 1800 | 1350 | 9.5 | 4 | 146 | | | |
| 2 | | | | 4 | | | | 1.63 | 1 | 73 | 7.3 | 53 | 80 |
| 0 | 90 | 130 | 80 | 0 | 4 | 2200 | 1600 | 5.57 | 4 | 120 | | | |
| 0 | | | | | 1 | 1700 | 1500 | 0.85 | 0 | 22 | | | |
| 0 | 80 | 130 | 80 | 0 | 5 | 1300 | 600 | 5.2 | 4 | 155 | | | |
| 0 | 70 | 140 | 60 | 4 | 14 | 1400 | 50 | 1.68 | 1 | 75 | 7.08 | 28 | 69 |
| 0 | 120 | 150 | 75 | 0 | 4 | 1130 | 940 | 3.85 | 3 | 85 | | | |
| 0 | 80 | 140 | 80 | 0 | | | | | | | | | |
| | | | | | | | | | | | | | |
| 3 | 130 | 100 | 60 | 1 | 20 | 2300 | 100 | 6.34 | 4 | 106 | 7.38 | 34 | 42 |
| 0 | 90 | 110 | 70 | 0 | 0 | 2525 | 1956 | 0.82 | 0 | 25 | | | |
| 0 | 90 | 150 | 90 | 0 | 7 | 1750 | 235 | 6.38 | 4 | 107 | | | |
| 0 | 100 | 130 | 70 | 0 | 4 | 2903 | 1600 | 1.02 | 0 | 96 | 7.46 | 38 | 55 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 110 | 90 | 70 | 4 | | | | | | | | | |
| 4 | 105 | 120 | 70 | 0 | 4 | 1600 | 1450 | 0.7 | 0 | 25 | | | |
| | | | | | | | | | | | | | |
| 4 | 105 | 110 | 60 | 0 | 15 | 3665 | 2728 | 1.56 | 1 | 118 | 7.49 | 35 | 51 |
| 3 | 110 | 120 | 70 | 0 | 6 | 745 | 2600 | 0.65 | 0 | 45 | | | |
| | | | | | | | | | | | | | |
| 0 | 90 | 140 | 80 | 0 | 5 | 2300 | 2100 | 2.29 | 2 | 158 | 7.51 | 13 | 157 |
| 1 | 105 | 130 | 90 | 0 | 2 | 1400 | 950 | 0.8 | 0 | 35 | | | |
| | | | | | | | | | | | | | |
| 0 | 95 | 150 | 70 | 0 | 2 | 750 | 1300 | 1.42 | 1 | 90 | | | |
| | | | | | | | | | | | | | |
| 0 | 90 | 140 | 70 | 0 | 1 | 1600 | 1800 | 0.65 | 0 | 35 | | | |
| 0 | 110 | 130 | 70 | 0 | 4 | 2345 | 1765 | 0.58 | 0 | 28 | 7.44 | 36 | 116 |
| 0 | 65 | 120 | 70 | 0 | 4 | 1800 | 2420 | 0.65 | 0 | 30 | 7.47 | 35 | 92 |
| 0 | 85 | 140 | 80 | 0 | 5 | 2000 | 2650 | 2.02 | 2 | 60 | | | |
| 0 | 130 | 150 | 80 | 0 | 9 | 3500 | 3250 | 2.27 | 2 | 176 | 7.14 | 52 | 60 |
| 2 | 95 | 135 | 75 | 0 | 4 | 1729 | 2480 | 0.74 | 0 | 64 | 7.48 | 42 | 91 |
| 0 | 85 | 140 | 70 | 0 | 7 | 1610 | 2135 | 0.9 | 0 | 67 | 7.58 | 37 | 67 |
| 2 | 100 | 100 | 50 | 4 | | | | | | | | | |
| 3 | 106 | 140 | 90 | 0 | 5 | 2000 | 1050 | 0.58 | 0 | 35 | | | |
| 0 | 95 | 110 | 55 | 3 | 2 | 1413 | 1080 | 0.81 | 0 | 42 | 7.4 | 46 | 45 |
| | | | | | | | | | | | | | |
| 0 | 95 | 150 | 85 | 0 | 4 | 2320 | 1170 | 1 | 0 | 43 | 7.42 | 43 | 87 |
| 0 | 90 | 130 | 70 | 0 | 7 | 4922 | 4665 | 1.34 | 1 | 41 | 7.62 | 27 | 70 |
| 0 | 125 | 130 | 90 | 0 | 5 | 2000 | 1000 | 0.68 | 0 | 58 | 7.48 | 35 | 69 |
| 0 | 120 | 120 | 80 | 2 | 3 | 3217 | 3100 | 1.5 | 1 | 71 | 7.48 | 49 | 81 |
| 0 | 85 | 110 | 70 | 0 | 0 | 2000 | 1500 | 0.45 | 0 | 25 | | | |
| 0 | 80 | 110 | 80 | | | | | | | | | | |
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| 3 | 100 | 130 | 80 | 0 | 7 | 2264 | 2445 | 0.94 | 0 | 38 | 7.6 | 19 | 118 |
| 0 | 110 | 50 | 30 | 4 | | | | | | | | | |

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| NA7 | K7 | CL7 | CA7 | GLU7 | LAC7 | HB7 | BEC7 | HCO37 | F7 | PF7 | PF7COD | GCS7 | GCS77 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 136 | 3.3 | 107 | 4.75 | 214 | 1.5 | 9.6 | 1.8 | 25 | 21 | 757.14 | 0 | 7T | 10 |
| | | | | | | | | | | | | | |
| 130 | 4.5 | 99 | 3.74 | 133 | 1.8 | 7.8 | -5.3 | 17.9 | 21 | 385.71 | 1 | 15 | 15 |
| 136 | 3.9 | 105 | 4.56 | 85 | 1.9 | 8.7 | -6.7 | 19.6 | 30 | 313.33 | 1 | 10T | 13 |
| | | | | | | | | | | | | 15 | 15 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | 10T | 13 |
| 152 | 4.4 | 121 | 4.48 | 197 | 2.2 | 9.1 | 4.2 | 28.5 | 100 | 180 | 3 | 2T | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | 0 | 15 | 15 |
| | | | | | | | | | | | | | |
| 144 | 3.6 | 103 | 4.72 | 172 | 4.3 | 21.8 | 3.3 | 29.4 | 35 | 160 | 3 | 10TS=11T | 14 |
| | | | | | | | | | | | | 14 | 14 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | 2T | 3 |
| | | | | | | | | | | | 0 | 15 | 15 |
| 145 | 2.7 | 109 | 3.93 | 199 | 1.6 | 9.7 | 2.9 | 25.1 | 60 | 116.67 | 2 | 15 | 15 |
| | | | | | | | | | | | | | |
| 135 | 4.4 | 104 | 4.25 | 287 | 1.5 | 10.2 | -13.3 | 11.8 | 60 | 166.67 | 2 | 15 | 15 |
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| | | | | | | | | | | | 1 | 15 | 15 |
| | | | | | | | | | | | 0 | 15 | 15 |
| 147 | 2.9 | 111 | 4.36 | 138 | 3.4 | | 1.1 | 24.6 | 35 | 180 | 3 | 10T | 14 |
| 142 | 3.6 | 107 | 4.6 | 210 | 0.7 | 15.5 | -0.4 | 23.9 | 35 | 234.29 | 2 | 9T | 13 |
| | | | | | | | | | | | | 15 | 15 |
| | | | | | | | | | | | | | |
| 135 | 2.9 | 103 | 3.89 | 142 | 1 | 12.1 | 4.9 | 28.2 | 40 | 195 | 3 | 8T | 12 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | 410 | 0 | 15 | 15 |
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| | | | | | | | | | | | 0 | 8T | 13 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | 1 | 15 | 15 |
| | | | | | | | | | | | | | |
| 134 | 5.5 | 102 | 3.93 | 51 | 10.4 | 14 | -15 | 10.8 | 100 | 226 | 2 | 15 | 15 |
| | | | | | | | | | | | 0 | 15 | 15 |
| 141 | 6.2 | 116 | 4.55 | 163 | 7.6 | 12.8 | -10.3 | 15 | 40 | 210 | 2 | 10 | 10 |
| | | | | | | | | | | | | 15 | 15 |
| 136 | 4 | 108 | 3.98 | 229 | 1.2 | 9.7 | 1.8 | 25 | 24 | 429.17 | 0 | 15 | 15 |
| | | | | | | | | | | | | | |
| 147 | 3.9 | 111 | 3.92 | 124 | 0.8 | 8 | -0.5 | 24 | 25 | 304 | 1 | 4T | 6 |
| | | | | | | | | | | | | | |
| 142 | 3.7 | 111 | 4.27 | 114 | 1.1 | 7.9 | 0.9 | 25.2 | 21 | 461.9 | 0 | 15 | 15 |
| 134 | 6.8 | 103 | 4.07 | 119 | 3.5 | 8.5 | -7.4 | 17.7 | 30 | 223.33 | 2 | 2T | 3 |
| 140 | 3.2 | 105 | 4.17 | 128 | 1 | 7.5 | -2.7 | 20.6 | 30 | 173.33 | 3 | 7T | 10 |
| 150 | 2.9 | 122 | 4.51 | 213 | 2.9 | 8.1 | -4.8 | 21 | 31 | 158.06 | 2 | 12 | 12 |
| | | | | | | | | | | | 0 | 15 | 15 |
| | | | | | | | | | 30 | 233.33 | 2 | 4T | 6 |
| | | | | | | | | | | | | 15 | 15 |
| | | | | | | | | | | | 0 | 15 | 15 |
| 143 | 3.2 | 110 | 4.64 | 108 | 2.3 | 8.7 | -0.3 | 26.1 | 60 | 133.33 | | | |
| | | | | | | | | | | | 0 | 15 | 15 |
| | | | | | | | | | | | 0 | 15 | 15 |
| | | | | | | | | | | | 0 | 15 | 15 |
| 133 | 5.1 | 108 | 4.38 | 222 | 12.7 | 9.6 | -21.7 | 8.3 | 50 | 138 | 3 | 2T | 3 |
| | | | | | | | | | | | 0 | 15 | 15 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 131 | 3.7 | 104 | 4.09 | 83 | 0.9 | 7 | -5 | 20.1 | 50 | 84 | 4 | 2T | 3 |
| | | | | | | | | | | | 0 | 25 | 15 |
| | | | | | | | | | | | 1 | 15 | 15 |
| 147 | 3.1 | 112 | 4.47 | 177 | 1.5 | 10.3 | 3.2 | 27 | 21 | 261.9 | 2 | 15 | 15 |

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| | | | | | | | | | | | 0 | 15 | 15 |
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| 138 | 3.2 | 103 | 4.09 | 120 | 5.3 | 8 | 3.4 | 26.7 | 45 | 113.33 | 3 | 9T | 13 |
| | | | | | | | | | | | 1 | 13 | 13 |
| | | | | | | | | | | | | | |
| 145 | 1.7 | 125 | 2.69 | 69 | 0.6 | 5.5 | -12.6 | 10.4 | 21 | 747.62 | 0 | 8T | 12 |
| | | | | | | | | | | | 1 | 15 | 15 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | 0 | 15 | 15 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | 1 | 15 | 15 |
| 144 | 3.4 | 111 | 4.48 | 216 | 2.6 | 13.2 | 0.3 | 24.5 | 31 | 374.19 | 1 | 3T | 6 |
| 134 | 3.5 | 107 | 4.52 | 98 | 0.7 | 9.2 | 1.8 | 25.5 | 35 | 262.86 | 2 | 15 | 15 |
| | | | | | | | | | | | 0 | 15 | 15 |
| 149 | 3.3 | 119 | 3.09 | 80 | 2 | 7.1 | -11.3 | 17.7 | 100 | 60 | 2 | 15 | 15 |
| 139 | 3 | 105 | 4.52 | 94 | 1.3 | 9.9 | 7.8 | 31.3 | 30 | 303.33 | 1 | 9T | 13 |
| 143 | 2.8 | 106 | 3.98 | 127 | 1 | 9.2 | 12.8 | 34.7 | 35 | 191.43 | 3 | 6T | 9 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | 0 | 15 | 15 |
| 139 | 3.6 | 105 | 3.78 | 234 | 1.4 | 9.2 | 3.7 | 28.5 | 28 | 160.71 | 2 | 15 | 15 |
| | | | | | | | | | | | | | |
| 139 | 3.5 | 102 | 4.67 | 212 | 1.8 | 12.8 | 3.4 | 27.9 | 30 | 290 | 2 | 8T | 11 |
| 142 | 4.5 | 111 | 4.36 | 164 | 2.1 | 8.8 | 6.6 | 27.8 | 30 | 233.33 | 2 | 3T | 4 |
| 140 | 3.4 | 107 | 4.57 | 121 | 1.1 | 12.6 | 2.6 | 26.1 | 21 | 328.57 | 1 | 4T | 6 |
| 154 | 3.2 | 115 | 3.92 | 205 | 1.5 | 13.6 | 13 | 36.5 | 31 | 261.29 | 2 | 15 | 15 |
| | | | | | | | | | | | 0 | 15 | 15 |
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| 134 | 3.7 | 102 | 3.94 | 118 | 2.4 | 8.8 | -2.9 | 18.7 | 21 | 561.9 | 0 | 3T | 4 |
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| GCS7COD | vent7 | PLATE7 | PLAT7COD | PLATE7COD | BIL7 | BIL7COD | PR7 | SBP7 | DP | CVS7 | AKINEXP | RIFLE7 | AKIN7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | 1 | 225000 | 0 | | 0.7 | 0 | 100 | 140 | 90 | 0 | | 0 | 0 |
| | | | | | | | | | | | 3 | | |
| 0 | 0 | 250000 | 0 | 0 | 0.6 | 0 | 90 | 110 | 55 | 0 | | 3 | 3 |
| 1 | 1 | 132000 | 1 | 1 | 1.3 | 1 | 110 | 150 | 85 | 0 | | 3 | 3 |
| 0 | 0 | | | | 0.3 | 0 | 80 | 110 | 70 | 0 | | 0 | 0 |
| | | | | | | | | | | | | 0 | 0 |
| 1 | 1 | 52000 | 2 | | 1.2 | 0 | 90 | 140 | 80 | 0 | | 3 | 3 |
| | 1 | 45000 | 3 | | 1 | 0 | 110 | 130 | 70 | 4 | | 1 | 1 |
| | | | | | | | | | | | 3 | | |
| 0 | 0 | 178000 | 0 | | 0.7 | 0 | 76 | 120 | 70 | 0 | | 0 | 0 |
| | | | | | | | | | | | 3 | | |
| 1 | 1 | 120000 | 1 | | 2.2 | 2 | 80 | 150 | 90 | 0 | | 0 | 0 |
| 1 | 0 | 110000 | 1 | | 0.8 | 0 | 115 | 120 | 70 | 0 | | 2 | 2 |
| | | | | | | | | | | | 3 | | |
| 4 | 1 | 100000 | 2 | | 1 | 0 | | | | 4 | | 0 | 0 |
| 0 | 0 | 156000 | 0 | | 6 | 3 | 95 | 125 | 80 | 0 | | 0 | 0 |
| 0 | 0 | 230000 | 0 | | 0.7 | 0 | 120 | 115 | 65 | 2 | | 2 | 2 |
| | | | | | | | | | | | 3 | | |
| 0 | 0 | 264000 | 0 | | 1.3 | 1 | 110 | 130 | 80 | 0 | | 0 | 0 |
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| | | | | | | | | | | | 1 | 1 | |
| 0 | 0 | 160000 | 0 | | 0.3 | 0 | 90 | 130 | 80 | 0 | | 3 | 3 |
| 0 | 0 | 250000 | 0 | | 0.6 | 0 | 90 | 130 | 80 | 0 | | 0 | 0 |
| 1 | 1 | 40000 | 3 | | 19.5 | 4 | 125 | 125 | 70 | 2 | | 2 | 2 |
| 1 | 1 | 400000 | 0 | | 0.4 | 0 | 96 | 150 | 80 | 0 | | 2 | 2 |
| 0 | 0 | 200000 | 0 | | 0.6 | 0 | 80 | 120 | 70 | 0 | | 3 | 3 |
| | | | | | | | | | | | | 0 | 0 |
| 2 | 1 | 191000 | 0 | | 1.1 | 0 | 82 | 130 | 66 | | | 0 | 0 |
| | | | | | | | | | | | | | |
| 0 | 0 | 285000 | 0 | | 0.6 | 0 | 90 | 140 | 80 | 0 | | 0 | 0 |
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| 1 | 1 | 160000 | 0 | 0 | 0.6 | 0 | 110 | 120 | 90 | 0 | | 0 | 0 |
| | | | | | | | | | | | 3 | | |
| 0 | 0 | 210000 | 0 | | 0.6 | 0 | 90 | 130 | 80 | 0 | | 0 | 0 |
| | | | | | | | | | | | | | |
| 0 | 0 | 150000 | 1 | | 1.2 | 0 | 116 | 97 | 60 | 4 | | 1 | 1 |
| 0 | 0 | 160000 | 0 | | 1.4 | 1 | 74 | 130 | 70 | 0 | | 0 | 0 |
| 2 | 0 | 11000 | 4 | | 2.9 | 2 | 100 | 140 | 80 | 0 | | 0 | 0 |
| 0 | 0 | 75000 | 2 | | 2 | 2 | 85 | 130 | 70 | 0 | | 3 | 3 |
| 0 | 0 | 170000 | 0 | | 0.8 | 0 | 85 | 120 | 60 | 0 | | 0 | 0 |
| | | | | | | | | | | | 3 | | |
| 3 | 1 | 55000 | 2 | | 6.31 | 3 | 100 | 140 | 80 | 0 | | 3 | 3 |
| | | | | | | | | | | | 3 | | |
| 0 | 0 | 60000 | 2 | | 1 | 0 | 90 | 145 | 80 | 0 | | 3 | 3 |
| 4 | 1 | 37000 | 3 | | 8 | 3 | 125 | 100 | 50 | 4 | | 3 | 3 |
| 2 | 1 | 144000 | 1 | | 1 | 0 | 90 | 120 | 70 | 2 | | 3 | 3 |
| 2 | 0 | 22000 | 3 | | 9 | 3 | | | | | | 3 | 3 |
| 0 | 0 | 80000 | 2 | | 0.7 | 0 | 90 | 160 | 80 | 0 | | 1 | 1 |
| 3 | 1 | 80000 | 2 | | 2 | 2 | 130 | 120 | 70 | 0 | | 0 | 0 |
| 0 | 0 | 246000 | 0 | | 1.7 | 1 | 80 | 120 | 80 | 0 | | 0 | 0 |
| 0 | 0 | 100000 | 2 | | 1.2 | 0 | 80 | 140 | 80 | 0 | | 3 | 3 |
| | | 60000 | 2 | | 6 | 3 | | | | | | 2 | 2 |
| 0 | 0 | 160000 | 0 | | 0.6 | 0 | 90 | 130 | 80 | 0 | | 2 | 2 |
| 0 | 0 | 150000 | 1 | | 0.8 | 0 | 70 | 130 | 80 | 0 | | 0 | 0 |
| 0 | 0 | 107000 | 1 | | 0.8 | 0 | 90 | 130 | 80 | 0 | | 3 | 3 |
| 4 | 1 | 90000 | 2 | | 0.8 | 0 | 50 | 150 | 70 | 4 | 3 | | |
| 0 | 0 | 105000 | 1 | | 0.8 | 0 | 105 | 160 | 90 | 0 | | 3 | 3 |
| | | | | | | | | | | | | 0 | 0 |
| | | | | | | | | | | | | | |
| 4 | 1 | 36000 | 3 | | 9.2 | 3 | 130 | 110 | 70 | 2 | | 3 | 3 |
| 0 | 0 | 185000 | 0 | | 0.6 | 0 | 85 | 120 | 80 | 0 | | 0 | 0 |
| 0 | 0 | 80000 | 2 | | 1 | 0 | 90 | 140 | 90 | 0 | | 3 | 3 |
| 0 | 0 | 75000 | 2 | | 0.7 | 0 | 120 | 110 | 60 | 0 | | 1 | 1 |

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| 1 | 1 | 8000 | 4 | | 12.9 | 4 | 115 | 124 | 62 | 2 | | 2 | 2 |
| 1 | 0 | 110000 | 1 | | 7 | 3 | 110 | 120 | 70 | 0 | | 0 | 0 |
| | | | | | | | | | | | 3 | | |
| 2 | 1 | 110000 | 1 | | 0.9 | 0 | 90 | 170 | 100 | 0 | | 2 | 2 |
| 0 | 0 | 250000 | 0 | 0 | 1.6 | 1 | 85 | 135 | 80 | 0 | | 0 | 0 |
| | | | | | | | | | | | 3 | | |
| 0 | 0 | 126000 | 1 | | 0.6 | 0 | 95 | 150 | 80 | 0 | | 1 | 1 |
| | | | | | | | | | | | | 0 | 0 |
| 0 | 0 | 170000 | 0 | | 0.8 | 0 | 90 | 150 | 75 | 0 | | 0 | 0 |
| 3 | 1 | 185000 | 0 | | 0.6 | 0 | 100 | 120 | 80 | 0 | | 0 | 0 |
| 0 | 0 | 75000 | 2 | | 0.94 | 0 | 70 | 125 | 60 | 0 | | 0 | 0 |
| 0 | 0 | 50000 | 3 | | 1 | 0 | 80 | 130 | 90 | 0 | | 3 | 3 |
| 0 | 0 | 6000 | 4 | | 1.4 | 1 | 125 | 135 | 75 | 0 | | 3 | 3 |
| 1 | 1 | 120000 | 1 | | 1.3 | 1 | 95 | 115 | 70 | 0 | | 0 | 0 |
| 3 | 1 | 148000 | 1 | | 0.8 | 0 | 85 | 140 | 65 | 0 | | 0 | 0 |
| | | | | | | | | | | | | | 3 |
| 0 | 0 | 53000 | 2 | | 8.2 | 3 | 100 | 140 | 90 | 0 | | 0 | 0 |
| 0 | 0 | 185000 | 0 | | 0.6 | 0 | 100 | 120 | 70 | 0 | | 0 | 0 |
| | | | | | | | | | | | 3 | | |
| 2 | 1 | 180000 | 0 | | 1 | 0 | 90 | 150 | 85 | 0 | | 0 | 0 |
| 4 | 1 | 200000 | 0 | | 0.6 | 0 | 80 | 120 | 80 | 0 | | 1 | 1 |
| 3 | 1 | 150000 | 1 | | 0.9 | 0 | 120 | 110 | 70 | 0 | | 0 | 0 |
| 0 | 0 | 166000 | 0 | | 1.1 | 0 | 105 | 120 | 75 | 0 | | 1 | 1 |
| 0 | 0 | 160000 | 0 | | 0.7 | 0 | 85 | 110 | 70 | 0 | | 0 | 0 |
| | | | | | | | | | | | | 0 | 0 |
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| 4 | 1 | 230000 | 0 | | 9.6 | 3 | 100 | 130 | 80 | 0 | | 0 | 0 |
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| PREATN | UNa | Ucreat | SNA | SCR | FeNa | FENALESS1 | TAKIPAKI | TAKIPAKIN | HD | RENALOCA | MORTALITY | outcomeat7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ?PRE | | | | | | | PAKI | 1 | 0 | RECOVEREI | NOT EXPIRI | NOTIMPROVED |
| ATN/PRE | 3 | 63.43 | 147 | 2.61 | 0.08 | 0 | PAKI | 1 | 0 | EXPIRED EA | EXPIRED | EXPIRED |
| ATN | | | | | | | PAKI | 1 | 1 | PAKI | NOT EXPIRI | IMPROVED |
| ATN | 5 | 41.65 | 138 | 3.78 | 0.33 | 0 | PAKI | 1 | 1 | PAKI | NOT EXPIRI | NOTIMPROVED |
| PRE | 64 | 107.12 | 146 | 1.15 | 0.47 | 0 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIRI | IMPROVED |
| ?PRE | 122 | 146 | 144 | 1.25 | 0.73 | 0 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIRI | IMPROVED |
| ?ATN | 91 | 42.6 | 132 | 6.06 | 9.81 | 1 | PAKI | 1 | 1 | PAKI WITH | NOT EXPIRI | IMPROVED |
| ?PRE | | | | | | | PAKI | 1 | 0 | PAKI WITH | NOT EXPIRI | NOTIMPROVED |
| ATN | 5 | 40.3 | 152 | 2.5 | 0.2 | 0 | PAKI | 1 | 0 | EXPIRED EA | EXPIRED | EXPIRED |
| PRE | 91 | 108.16 | 134 | 0.95 | 0.6 | 0 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIRI | IMPROVED |
| ATN | 82 | 103.73 | 141 | 2.56 | 1.44 | 1 | PAKI | 1 | 1 | EXPIRED | EXPIRED | EXPIRED |
| PRE | 189 | 170 | 153 | 0.92 | 0.67 | 0 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIRI | NOTIMPROVED |
| ?ATN | 31 | 113.16 | 140 | 3.6 | 0.7 | 0 | PAKI | 1 | 1 | PAKI WITH | NOT EXPIRI | NOTIMPROVED |
| ATN | | | | | | | PAKI | 1 | 0 | EXPIRED W | EXPIRED | EXPIRED |
| ?PRE | 169 | 30.47 | 138 | 1.54 | 6.19 | 1 | TAKI | 0 | 0 | IMPROVED | EXPIRED | EXPIRED |
| ?PRE | 78 | 45.57 | 141 | 2.13 | 2.59 | 1 | PAKI | 1 | 0 | RECOVEREI | NOT EXPIRI | IMPROVED |
| ?PRE | 87 | 36.95 | 143 | 2.09 | 3.44 | 1 | PAKI | 1 | 0 | PAKI | NOT EXPIRI | IMPROVED |
| ATN | 69 | 45.26 | 139 | 5.6 | 6.14 | 1 | PAKI | 1 | 1 | DAMA | | |
| ?PRE | 104 | 35.73 | 147 | 2.32 | 4.59 | 1 | PAKI | 1 | 0 | RECOVEREI | NOT EXPIRI | NOTIMPROVED |
| | | | | | | | PAKI | 1 | 0 | IMPROVED | EXPIRED | EXPIRED |
| | 94 | 49.14 | 138 | 4 | 5.54 | 1 | PAKI | 1 | 0 | EXPIRED | EXPIRED | EXPIRED |
| ?ATN | 105 | 12.69 | 141 | 1.1 | 6.46 | 1 | EXPIRED | 2 | 0 | EXPIRED | EXPIRED | EXPIRED |
| ATN | 130 | 15.93 | 137 | 3.62 | 21.56 | 1 | PAKI | 1 | 1 | PAKI | NOT EXPIRI | IMPROVED |
| PRE | 16 | 75.15 | 131 | 1.61 | 0.26 | 0 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIRI | IMPROVED |
| ATN | | | | | | | PAKI | 1 | 0 | PAKI | NOT EXPIRI | NOTIMPROVED |
| ATN | | | | | | | PAKI | 1 | 0 | PAKI | NOT EXPIRI | NOTIMPROVED |
| ATN | 105 | 5.24 | 138 | 2.16 | 31.36 | 1 | PAKI | 1 | 1 | PAKI | NOT EXPIRI | IMPROVED |
| PRE | 151 | 24.9 | 143 | 1.05 | 4.45 | 1 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIRI | IMPROVED |
| PRE | 35 | 71.93 | 140 | 1.09 | 0.38 | 0 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIRI | NOTIMPROVED |
| ?ATN | 83 | 48.09 | 144 | 2.32 | 2.78 | 1 | EXPIRED | 2 | 1 | EXPIRED | EXPIRED | EXPIRED |
| PRE | | | | | | | TAKI | 0 | 0 | RECOVEREI | NOT EXPIRI | IMPROVED |
| ATN | 60 | 35.54 | 139 | 1.86 | 2.26 | 1 | PAKI | 1 | 0 | PAKI WITH | EXPIRED | EXPIRED |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ATN | 107 | 29.72 | 144 | 3.79 | 9.48 | 1 | EXPIRED | 2 | 0 | EXPIRED | EXPIRED | EXPIRED |
| PRE | 114 | 76.33 | 150 | 0.69 | 0.69 | 0 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIR | NOTIMPROVED |
| ATN | 121 | 42.83 | 141 | 3.22 | 6.45 | 1 | PAKI | 1 | 0 | DAMA | DAMA | DAMA |
| PRE | 69 | 52.61 | 139 | 0.66 | 0.62 | 0 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| | 5 | 104.43 | 136 | 2.1 | 0.07 | 0 | PAKI | 1 | 0 | EXPIRED EA | EXPIRED | EXPIRED |
| ATN | 9.5 | 100.59 | 140 | 1.73 | 0.12 | 0 | TAKI | 0 | 0 | RECAKI | NOT EXPIR | NOTIMPROVED |
| ?ATN | 24 | 71.26 | 142 | 1.44 | 0.34 | 0 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| PRE | 5 | 29.52 | 148 | 2.89 | 0.33 | 0 | PAKI | 1 | 0 | RECOVEREI | NOT EXPIR | NOTIMPROVED |
| ATN | | | | | | | PAKI | 1 | 0 | PAKI | NOT EXPIR | IMPROVED |
| ?ATN | | | | | | | PAKI | 1 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| ATN | 25 | 49.9 | 138 | 1.84 | 0.67 | 0 | PAKI | 1 | 0 | EXPIRED | EXPIRED | EXPIRED |
| ATN | 109 | 79.54 | 145 | 3.28 | 3.1 | 1 | PAKI | 1 | 0 | PAKI | NOT EXPIR | NOT EXPIRED |
| ?ATN | 39 | 74.55 | 131 | 1.32 | 0.53 | 0 | PAKI | 1 | 1 | EXPIRED | EXPIRED | EXPIRED |
| | | | | | | | PAKI | 1 | 1 | PAKI WITH | NOT EXPIR | NOTIMPROVED |
| ATN | 149 | 13.53 | 144 | 1.92 | 14.68 | 1 | PAKI | 1 | 1 | PAKI WITH | EXPIRED | EXPIRED |
| ATN | | | | | | | PAKI | 1 | 1 | PAKI | NOT EXPIR | NOTIMPROVED |
| | | | | | | | PAKI | 1 | 0 | PAKI WITH | EXPIRED | EXPIRED |
| ATN | | | | | | | PAKI | 1 | 0 | PAKI WITH | NOT EXPIR | IMPROVED |
| PRE | 80 | 36.42 | 137 | 1.56 | 2.5 | 1 | TAKI | 0 | 0 | IMPROVED | EXPIRED | EXPIRED |
| ?PRE | 27 | 92.23 | 131 | 1.92 | 0.43 | 0 | PAKI | 1 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| ATN | 71 | 51.43 | 136 | 4.51 | 4.58 | 1 | PAKI | 1 | 1 | PAKI | NOT EXPIR | IMPROVED |
| ?ATN | 57 | 27.21 | 143 | 1.07 | 1.57 | 1 | PAKI | 1 | 0 | PAKI | NOT EXPIR | NOTIMPROVED |
| ATN | | | | | | | PAKI | 1 | 0 | PAKI | NOT EXPIR | IMPROVED |
| ?PRE | 150 | 174 | 141 | 1.25 | 0.76 | 0 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| ATN | 92 | 80.26 | 135 | 5.78 | 4.91 | 1 | PAKI | 1 | 1 | PAKI | NOT EXPIR | IMPROVED |
| ATN | | | | | | | PAKI | 1 | 0 | PAKI WITH | EXPIRED | EXPIRED |
| ATN+ AGN | | | | | | | PAKI | 1 | 1 | PAKI | NOT EXPIR | IMPROVED |
| PRE | 116 | 35.3 | 132 | 0.69 | 1.72 | 1 | TAKI | 0 | 0 | IMPROVED | EXPIRED | EXPIRED |
| | | | | | | | EXPIRED | 2 | 1 | EXPIRED | EXPIRED | EXPIRED |
| ATN | | | | | | | PAKI | 1 | 1 | PAKI | NOT EXPIR | NOTIMPROVED |
| PRE | 137 | 131.55 | 138 | 0.98 | 0.74 | 0 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| ATN | 125 | 14.71 | 134 | 5.8 | 36.78 | 1 | PAKI | 1 | 1 | PAKI | NOT EXPIR | NOTIMPROVED |
| ?ATN | 5 | 75.17 | 151 | 1.53 | 0.07 | 0 | PAKI | 1 | 0 | PAKI | NOT EXPIR | NOTIMPROVED |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ATN | | | | | | | PAKI | 1 | 1 | PAKI WITH | EXPIRED | EXPIRED |
| PRE | | | | | | | TAKI | 0 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| ATN | 14 | 81.66 | 131 | 2.6 | 0.34 | 0 | PAKI | 1 | 0 | EXPIRED EA | EXPIRED | EXPIRED |
| ATN | 102 | 13.4 | 137 | 1.2 | 6.67 | 1 | PAKI | 1 | 0 | PAKI | NOT EXPIR | NOTIMPROVED |
| PRE | | | | | | | TAKI | 0 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| ATN | | | | | | | PAKI | 1 | 0 | EXPIRED | EXPIRED | EXPIRED |
| ATN | | | | | | | PAKI | 1 | 0 | PAKI WITH | NOT EXPIR | NOTIMPROVED |
| PRE | | | | | | | PAKI | 1 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| ATN | 13 | 44.35 | 138 | 2.5 | 0.53 | 0 | PAKI | 1 | 1 | EXPIRED W | EXPIRED | EXPIRED |
| ATN | 112 | 35 | 137 | 2.04 | 4.76 | 1 | PAKI | 1 | 0 | PAKI WITH | NOT EXPIR | IMPROVED |
| ?PRE | 21 | 191.5 | 137 | 1.29 | 0.1 | 0 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| ?PRE | | | | | | | PAKI | 1 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| PRE | 209 | 136.24 | 138 | 1.07 | 1.19 | 1 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIR | NOTIMPROVED |
| ?PRE | 110 | 25.32 | 135 | 1.71 | 5.5 | 1 | PAKI | 1 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| ATN | 114 | 11.26 | 134 | 2.37 | 17.91 | 1 | PAKI | 1 | 0 | PAKI | NOT EXPIR | IMPROVED |
| ATN | 44 | 1.46 | 138 | 2.64 | 57.65 | 1 | PAKI | 1 | 1 | PAKI | NOT EXPIR | NOTIMPROVED |
| ?ATN | 6 | 156.35 | 141 | 1.84 | 0.05 | 0 | PAKI | 1 | 0 | IMPROVED | NOT EXPIR | NOTIMPROVED |
| ATN | 120 | 23.42 | 141 | 3.08 | 11.19 | 1 | PAKI | 1 | 0 | RECOVEREI | NOT EXPIR | NOTIMPROVED |
| ATN | 36 | 85.69 | 139 | 3.84 | 1.16 | 1 | PAKI | 1 | 1 | EXPIRED | EXPIRED | EXPIRED |
| ?ATN | 5 | 148.16 | 135 | 3.59 | 0.09 | 0 | PAKI | 1 | 1 | RECOVEREI | NOT EXPIR | IMPROVED |
| ATN | | | | | | | PAKI | 1 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| ATN | 85 | 53.09 | 140 | 1.51 | 1.73 | 1 | PAKI | 1 | 1 | EXPIRED | EXPIRED | EXPIRED |
| PRE | 112 | 110.08 | 136 | 1.05 | 0.79 | 0 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIR | NOTIMPROVED |
| ?ATN | 133 | 66 | 145 | 1.39 | 1.93 | 1 | PAKI | 1 | 0 | PAKI | NOT EXPIR | NOTIMPROVED |
| PRE | 146 | 17.8 | 143 | 0.91 | 5.22 | 1 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIR | NOTIMPROVED |
| ?ATN | 40 | 95.96 | 142 | 1.99 | 0.58 | 0 | PAKI | 1 | 0 | PAKI | NOT EXPIR | IMPROVED |
| PRE | 131 | 27.55 | 135 | 0.61 | 2.15 | 1 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| PRE | 4 | 17.29 | 150 | 1.1 | 0.17 | 0 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIR | IMPROVED |
| ?ATN | | | | | | | PAKI | 1 | 1 | EXPIRED EA | EXPIRED | EXPIRED |
| ?ATN | 65 | 46.89 | 134 | 3.2 | 3.31 | 1 | PAKI | 1 | 0 | EXPIRED | EXPIRED | EXPIRED |
| ?ATN | 49 | 38.4 | 132 | 2.02 | 1.95 | 1 | EXPIRED | 2 | 0 | EXPIRED | EXPIRED | EXPIRED |
| ?PRE | | | | | | | PAKI | 1 | 0 | RECOVEREI | NOT EXPIR | NOTIMPROVED |
| | | | | | | | PAKI | 1 | 0 | PAKI WITH | EXPIRED | EXPIRED |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ATN | 112 | 84.26 | 141 | 5 | 4.71 | 1 | EXPIRED | 2 | 1 | EXPIRED | EXPIRED | EXPIRED |
| | 109 | 14.69 | 147 | 1.5 | 7.57 | 1 | EXPIRED | 2 | 1 | EXPIRED EA | EXPIRED | EXPIRED |
| ATN | 84 | 117.86 | 138 | 7.27 | 3.75 | 1 | PAKI | 1 | 1 | EXPIRED W | EXPIRED | EXPIRED |
| | 117 | 24.12 | 145 | 2.3 | 7.69 | 1 | EXPIRED | 2 | 0 | EXPIRED EA | EXPIRED | EXPIRED |
| PRE | 108 | 25.25 | 135 | 2.2 | 6.97 | 1 | TAKI | 0 | 0 | RECOVEREI | NOT EXPIRI | IMPROVED |